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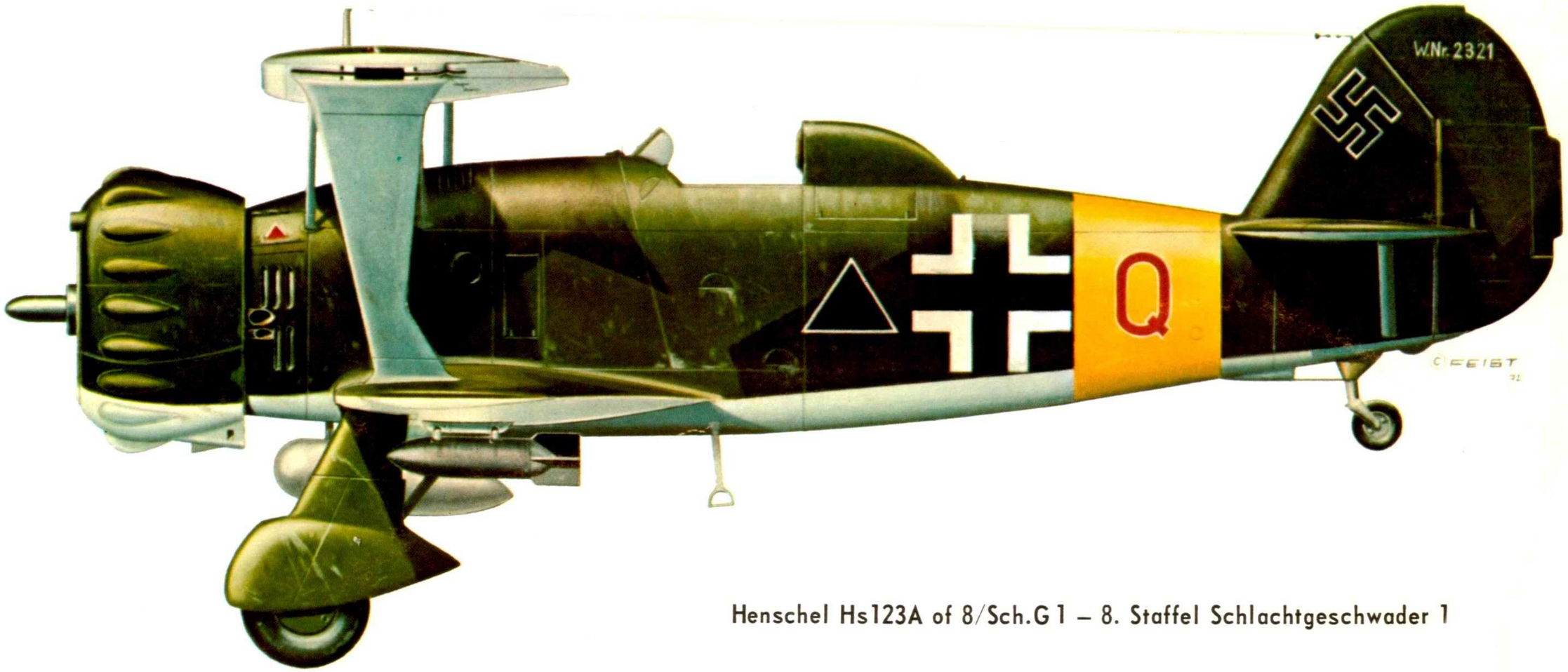

Henschel Hs123A of 8/Sch.G 1 – 8. Staffel Schlachtgeschwader 1

Luftwaffe in Action

Luftwaffe in Action
Part III

Created by Uwe Feist
Captions by Mike Dario

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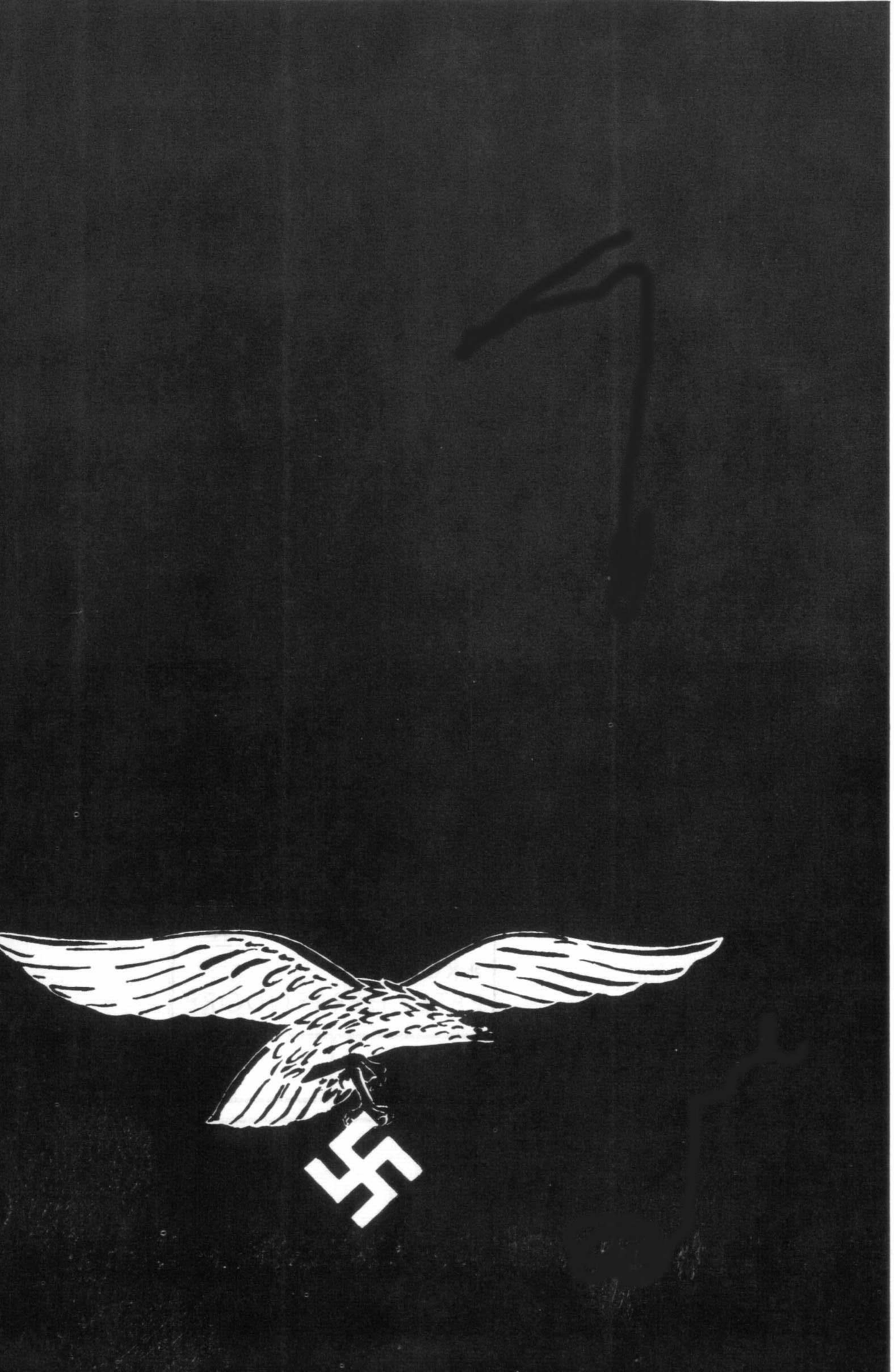

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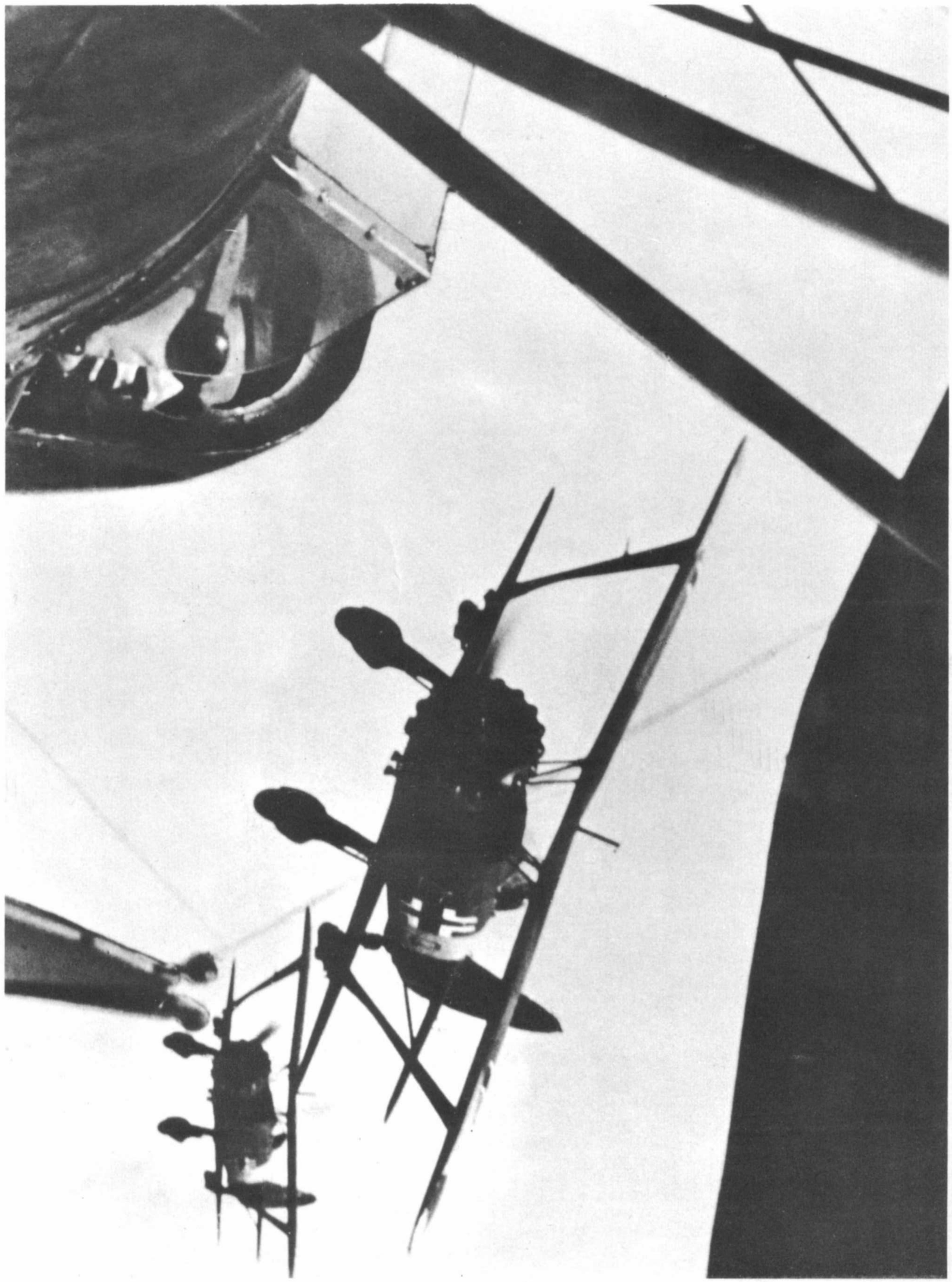
An interesting photograph of a gaggle of **Hs 123As** circling over the battlefield like birds of prey, looking for new targets. Each aircraft has already dropped two of its four bombs and they are presumably ready to drop the other two.



Henschel Hs 123

In the early 1930s, the world began to learn of a new concept in aerial warfare. The United States Navy's highly trained carrier pilots had developed a new way to deliver bombs on to small targets. It was called "dive bombing". One of the people who was most interested in this new concept was a man named Ernst Udet. He was a World War One air ace and was a Colonel in the clandestine German **Luftwaffe**. Through Udet's efforts, he succeeded in interesting others in the German Air Ministry in the concept of dive-bombing, and even succeeded in having several German aviation firms submit designs for a German dive-bomber.

One of these firms was **Henschel** and its effort was later designated **Hs 123**. By the time the first **Hs 123** was built and ready for testing, the German Air Force's technical staff had changed their minds about biplanes and had decided that they wanted a monoplane as a dive-bomber.

The **Luftwaffe** evaluated and rejected the robust **Hs 123** as a dive-bomber, but the test pilots liked the airplane to the point where the **Hs 123** was accepted as a light attack bomber, or **Schlachtflugzeug**.

This plucky biplane saw action in the very first campaigns of the Second World War and continued to see action until late 1943, when all of them had finally succumbed to extinction through attrition.

The **Henschel Hs 123** was built in two main subtypes. The **Hs 123A** featured an open cockpit, an armament of 2 x 7.9mm **MG 17** machine guns mounted to fire through the cowl and the propeller arc, and she could carry up to 250 kg of bombs under the wings and on the fuselage mount under the belly.

The **Henschel Hs 123B** was very similar to the **A** version, except that it featured a clear glass sliding canopy to protect the pilot from the natural elements, and was fitted with additional armor plating around the cockpit in order to protect the pilot from the man-made elements. All **"B"** versions were designed for and specifically used by the **Schlachtgeschwaders**, or ground attack wings, on the Eastern Front.

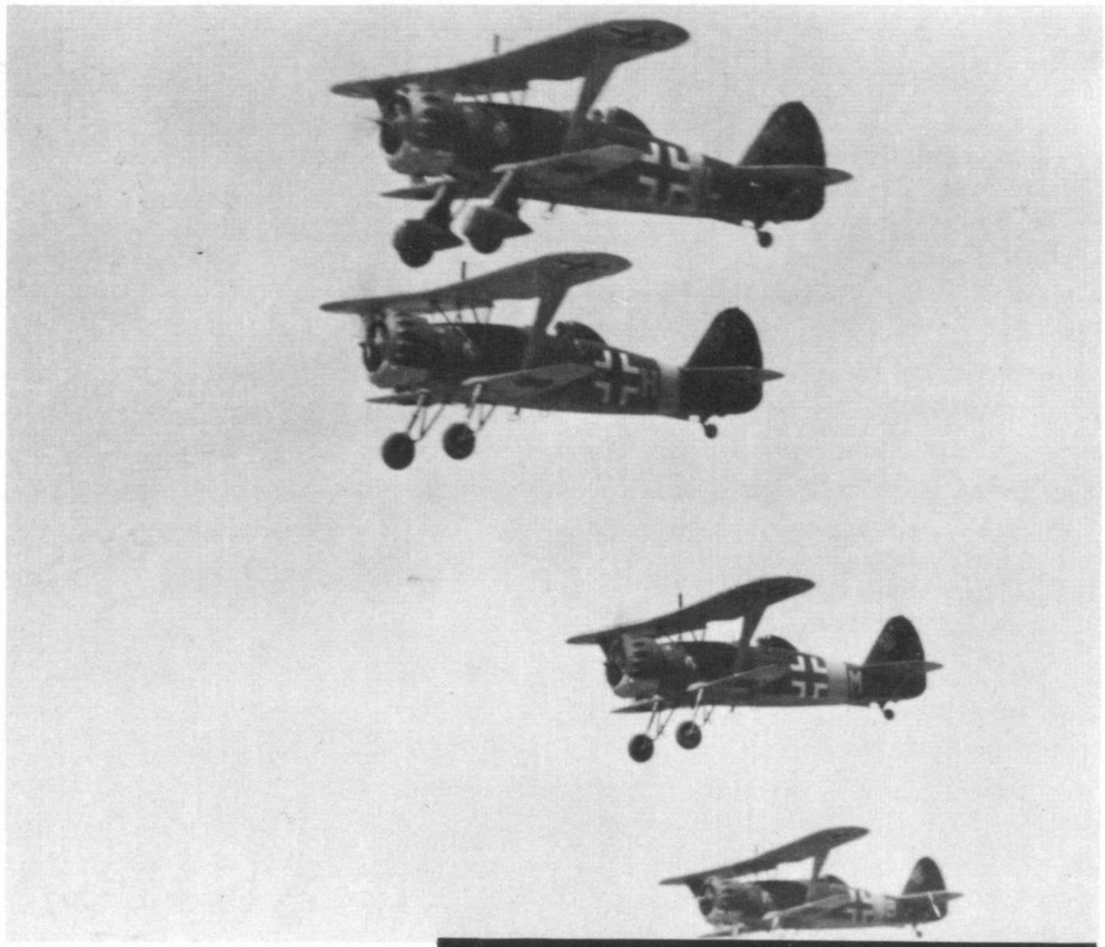
Hs 123As bearing the infantryman's assault badge on their fuselage sides await with full armament and fuel tanks for their pilots. The **Infanterie-Sturmabzeichen** was found on virtually all ground support aircraft as an indication of the unity between the pilots and their land-bound brothers.

Ground crewmen ready this **Henschel** for another mission over the Soviet lines. She is shown loaded with four 50 kg general purpose **SC 50** bombs and her aerodynamic wheel covers have been discarded, exposing the gear struts and shock absorbers.

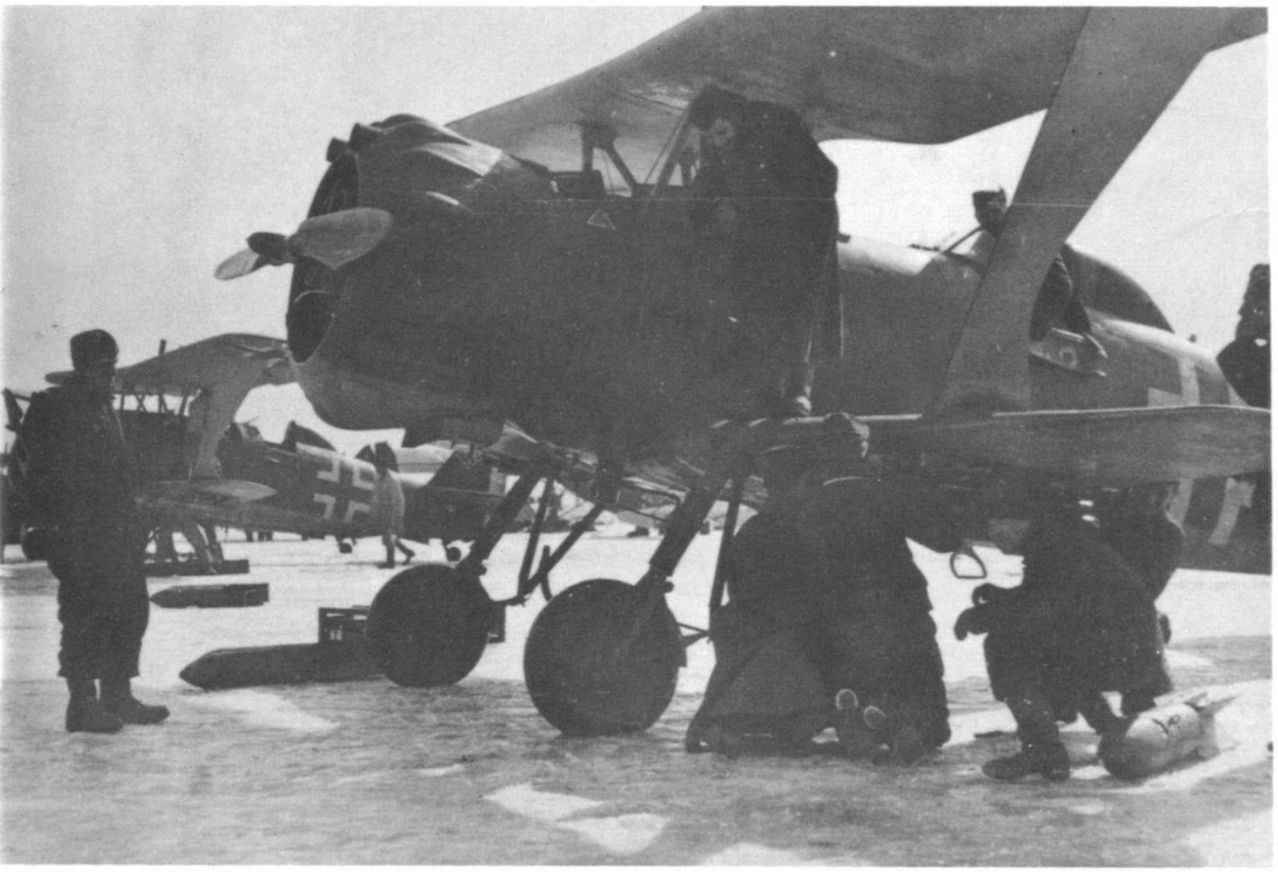
A fine photograph of the **BMW 132** 660 horsepower radial engine of an **HS 123.** Note the NACA-style cowling that typified the **Hs 123,** with its streamlined fairings located over the valve covers of the 9-cylinder engine.

As mechanics work on a **Messerschmitt Bf 109E-3** in the foreground, **Henschel Hs 123As** of the **4th Staffel** of **Training Wing 1** wait on a grassy airfield during the Polish campaign of 1939. The typical segmented "splinter" camouflage pattern is clearly visible on all of the **Hs 123s.**

A classic in-flight photo of four **Henschels** of **Schlachtgeschwader 1** on the East Front in 1942. All aircraft have the characteristic yellow bands around the fuselage that denoted aircraft of the East Front. The aircraft at the top of the photo is the only one of the group that has retained its streamlined landing gear spats and covers.



On a cold winter morning, **Luftwaffe** armorers and ground crewmen bomb up a flight of **Henschels** on an ice-covered runway. The bombs on the ground are **SC100s**; 100 kg general purpose bombs. Notice the inadequate winter clothing worn by the ground crewmen; an indication that the supply situation was already bad at this point in 1942.



Henschel Hs 129

The **Henschel Hs 129** was the end result of the development of an idea that had its birth during the First World War. During that war it became evident to military thinkers on both sides that low-flying aircraft attacking enemy troops could rapidly do the job that long, expensive artillery preparations did. These same aircraft would be well suited to attack and disrupt troop movements near the front, much to the advantage of the attacking side.

With those thoughts in mind, the Germans went about developing a series of aircraft that could perform this work. Their main functions would be to bomb and machine gun, or strafe, the enemy ground troops. As a matter of fact, the English word "strafe" comes directly from the German verb **"strafen"**, which means "to punish".

The end of the First World War and the subsequent restrictions placed on the German military brought a halt to the development of ground attack aircraft, but it was started up again in the late 1930s after Hitler had risen to power and made the clandestine **Luftwaffe** public.

Between 1938 and 1939, the **Luftwaffe's** technical office came to certain conclusions regarding ground attack aircraft. During the Spanish Civil War, the **Luftwaffe** had experimented with ground attack methods using **Heinkel He 51** biplane fighters, **Henschel Hs 123** biplanes, and **Junkers Ju 87** monoplane dive bombers. After two years of experimentation, the technical office had decided that the standard **Luftwaffe** ground attack aircraft would possess the following characteristics:

a. It must be a small aircraft, in order to present a small target to the enemy.
b. It should not have excessively high speed, so that the pilot would have added accuracy when delivering ordnance on enemy positions.
c. It should be heavily armored to protect the pilot.
d. It should be heavily armed, to do the most damage to the enemy.
e. It should be twin-engined, to provide better protection to the aircraft and the pilot, in case one engine should be disabled by enemy fire.

The **Hs 129** first took to the air as the **"A"** version. It was a dangerous airplane to fly. It was directionally unstable when airborne, and the two little **Argus** engines did not provide anywhere near enough power.

The victory over the French in the German campaigns of 1940 made available to the **Luftwaffe** a large number of **Gnome-Rhone 14M** radial aircraft engines and these were exactly what **Henschel** was looking for to make the **Hs 129** a better airplane.

The **Henschel Hs 129B** was the first German aircraft fitted with the French engine and the **Gnome-Rhones** proved to be powerful enough to allow the **Hs 129B** to be committed to action as early as the autumn of 1941.

The little **Hs 129** proved itself well. Although the major **Henschel Hs 129** subtype was the **B** version, **Henschel** prepared a number of armament packs that could be externally fitted to the aircraft, dependent upon the type of mission and the kind of target. These packs made the **Henschel** a very versatile little aircraft.

Hs 129s were produced from 1941 until 1944. A total of almost 900 aircraft were built, with 1943 being the year of greatest production when over 400 were completed.

Pilots of a **Schlachtgeschwader** discuss a mission on the tailplane of this **Hs 129.** The small holes in the vertical and horizontal control surfaces appear at first glance to be bullet holes but they are actually only the attachment points for braces that hold the moveable surfaces in place when the aircraft is not being used.

Henschel Hs 129B variants and differences (armament only)

Hs 129B-0 pre-production aircraft. Only seven built

Hs 129B-1 Standard production version. Basic internal armament was 2 x 20mm **MG 151/20** cannons with 500 rounds of ammo, and 2 x 7.92mm **MG 17** machine guns with 500 rounds of ammo.

Hs 129B-1/R2 Same aircraft as **B-1**, but featured the addition of a belly armament pack with a single 30mm **MK 101** cannon and 30 rounds of ammo.

Hs 129B-1/R3 Featured an internal armament change to 4 x 7.92mm machine guns with 4000 rounds of ammo, 1000 rounds per gun.

Hs 129B-1/R4 Same as **B-1**, but with bomb-carrying capability in the form of either 4 x 50 kg bombs, 1 x 250 kg bomb, or one bomb cannister with 96 **SD 2** anti-personnel bomblets.

Hs 129B-1/R5 Armed reconnaisance version, carrying the standard armament of the **B-1**, plus a camera pack with an **RB 20/30** strip camera that fitted under the fuselage.

Hs 129B-2 First major modification in **B** series. Featured a strengthened fuselage and a change in internal armament to 2 x 20mm **MG 151/20** cannon and 2 x 13mm **MG 131** machine guns.

Hs 129B-2/R1 Same as the **B-2**. Did not carry any other modifications.

Hs 129B-2/R2 Same as **B-2**, but with addition of a belly armament pack containing a single 30mm **MK 103** cannon. Gun and pack could be jettisoned in case of emergency.

Hs 129B-2/R3 Internal armament modified to only 2 x 20mm **MG 151** cannon. Carried an armament pack which contained 1 x 37mm **BK 3.7** cannon. This aircraft proved excellent for fighting armored vehicles.

Hs 129B-2/R4 No internal armament. Fitted with an armament pack containing a single 75mm **BK 7.5** cannon under the fuselage. Unwieldy aircraft to fly, dangerous to shoot the big gun in the air, but used in the final days of the war regardless of the danger to pilot and aircraft.

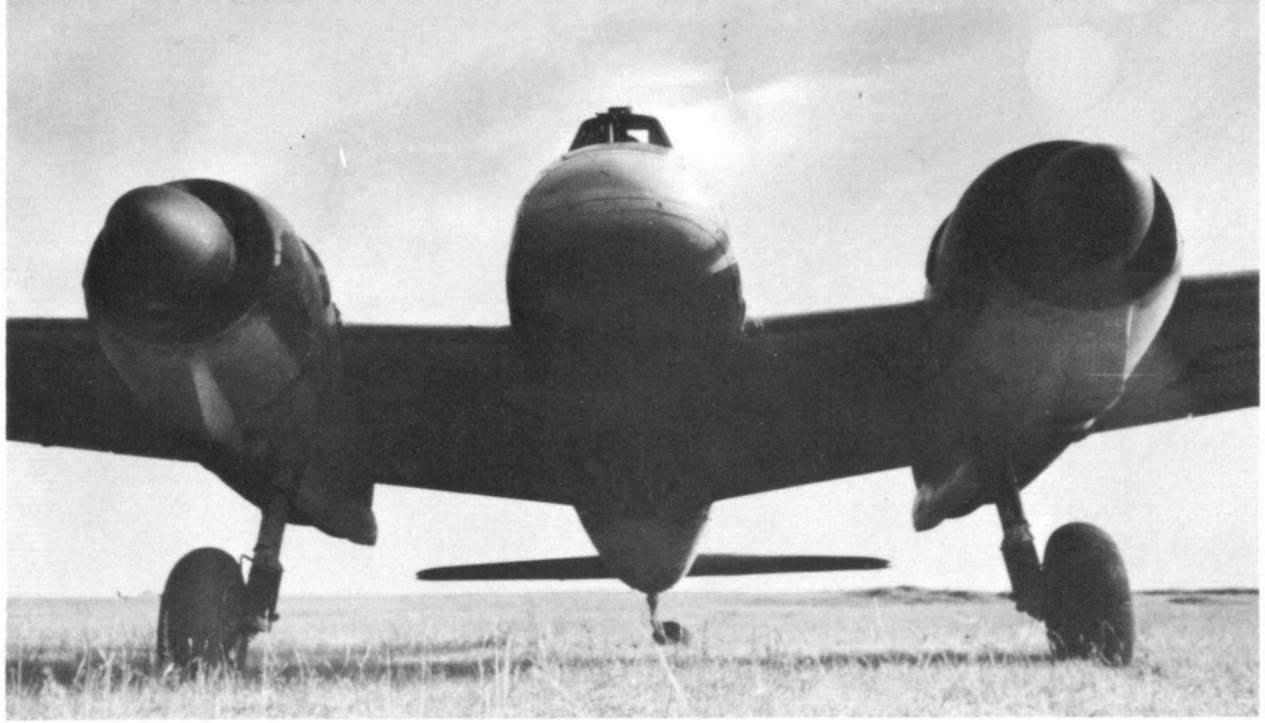
(Right) This pilot slides into the armored cockpit of his **Hs 129B-2/R2** ground attack aircraft. Barely visible in the shadows below the forward fuselage is the 30mm **MK 103** cannon.

Crewmen prepare this **Hs 129B-2/R3** for another mission. The **B-2/R3** differed from the **B-2/R2** in that it carried a 37mm **BK 3.7** cannon in its ventral pack and had no **MG 17** armament in the lower troughs in the nose.

A **Henschel Hs 129B** warms up its twin **Gnome-Rhone** radial engines. The **Hs 129B-1** was the standard production subtype and was armed with 2 x 20mm **MG 151** cannon and 2 x 7.92mm **MG 17** machine guns.

The pilot signals to the ground crew to stand clear as he starts the port engine. Visible behind the pilot's upraised left hand is the **Revi** reflector gun sight mounted in front of the armored windshield.

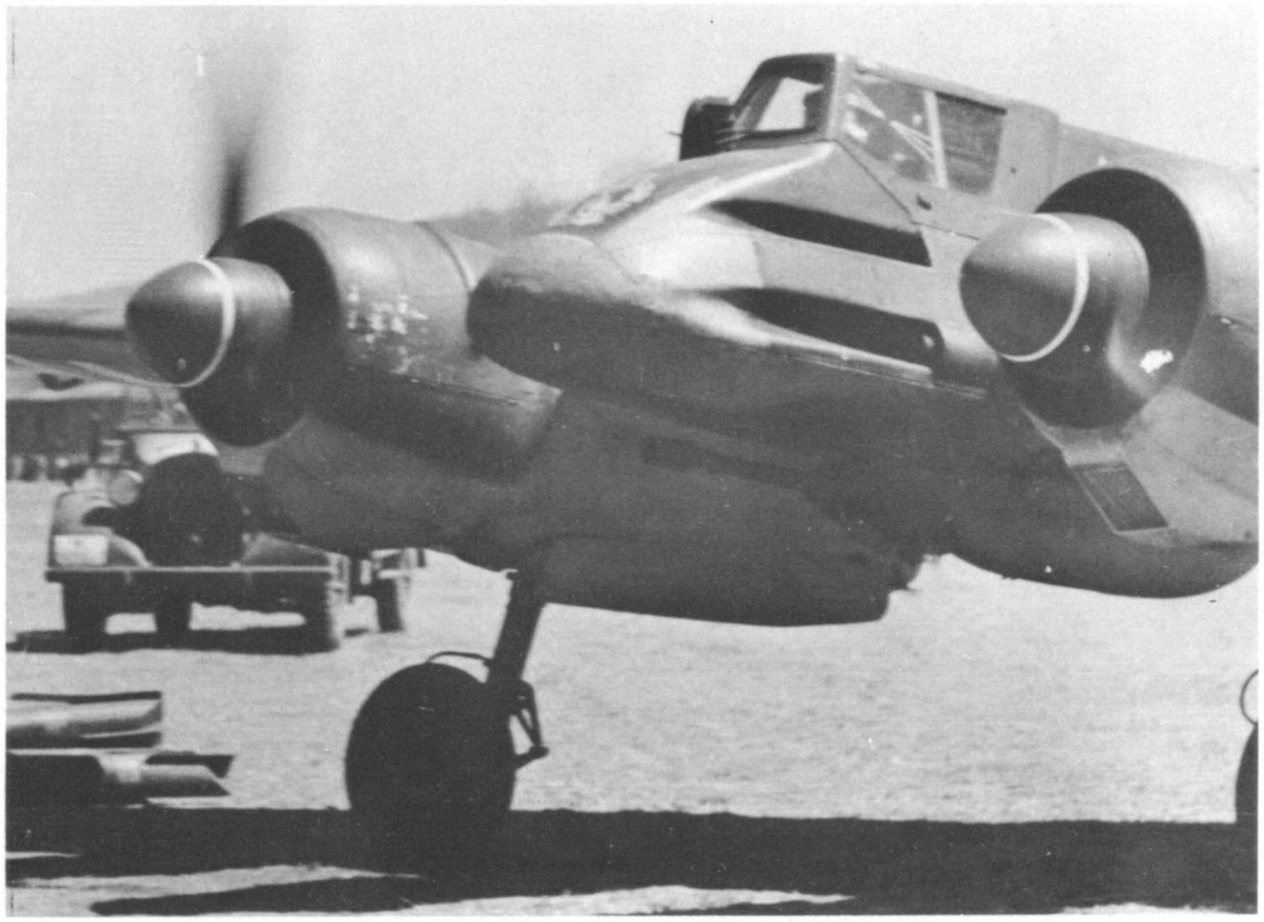
With his canopy shut and both engines roaring, the pilot takes another look around before moving to the runway. The white lines on the side of the canopy aid the pilot in determining the angle of his dive by lining up the line desired with the horizon.



An impressive front view of a yellow-nosed **Henschel.** The yellow markings on the nose were used to identify the **Hs 129** to friendly troops on the ground, as well as to friendly fighters in the air overhead.

(Below left) This **Henschel Hs 129B-2** sports an aerodynamic cover over the breech mechanism and belt feed guides of its 37mm anti-tank gun under the belly.

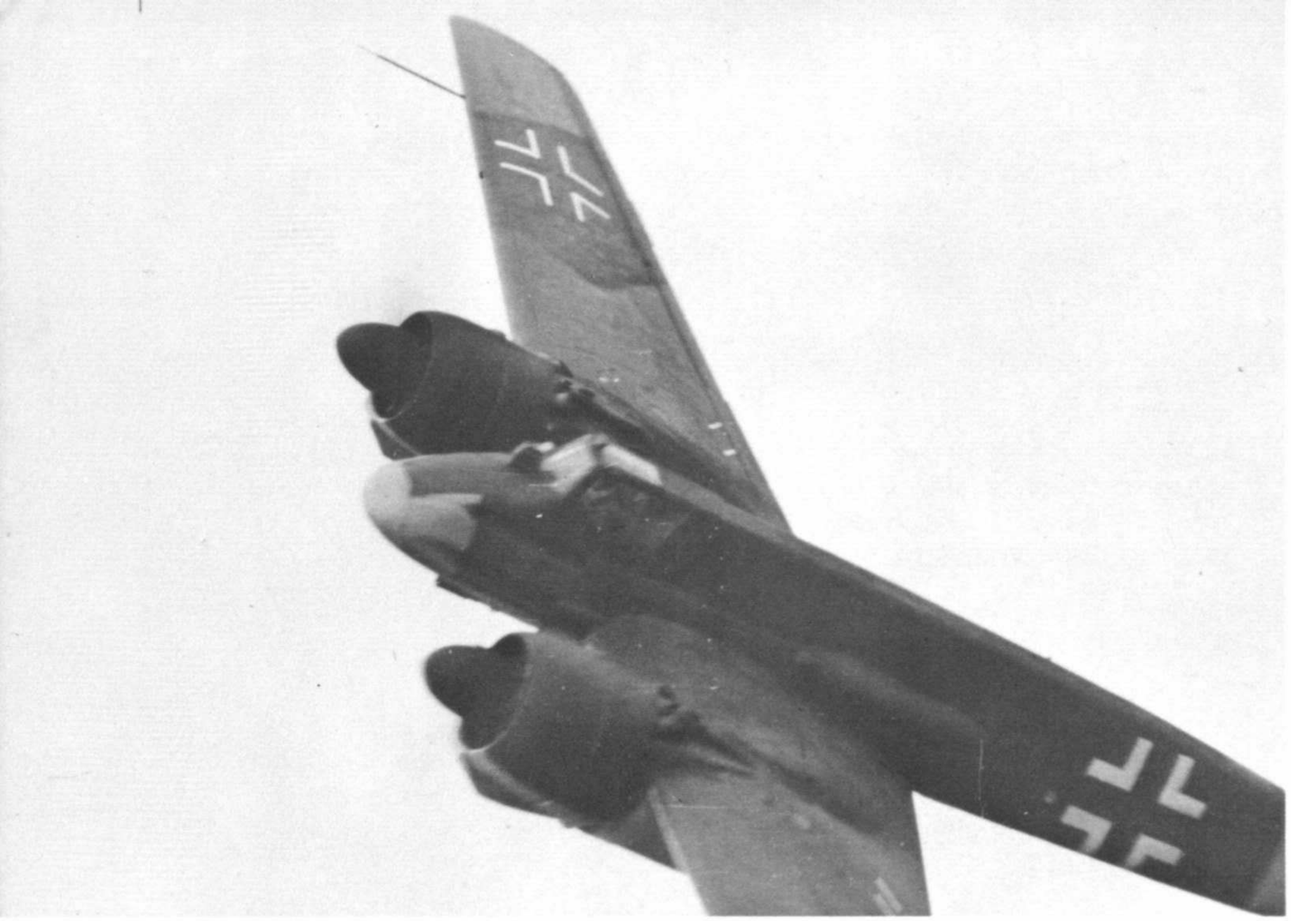
A weatherbeaten **Hs 129** bearing a 30mm **MK 103** cannon pack guns its engines at the end of the runway. This aircraft belonged to the **4th Staffel** of **Schlachtgeschwader 1** and was used mainly as a tank-hunter; its 30mm projectiles were capable of penetrating the rear decking and engine covers of most Soviet tanks.



A view of the lightweight warrior with a real knockout punch. In this photo, the peaceful, cloud-filled Russian sky hides well the fury it will behold later in the day.

(Below left)
This **Hs 129B** is shown just prior to becoming airborne. The tailwheel is already off the ground and the pilot is applying left rudder to keep the aircraft on a steady course. This **Henschel** bears not only the Infantry Assault Badge on her nose, but also the insignia of the ground attack **Staffel** of Training Wing 2.

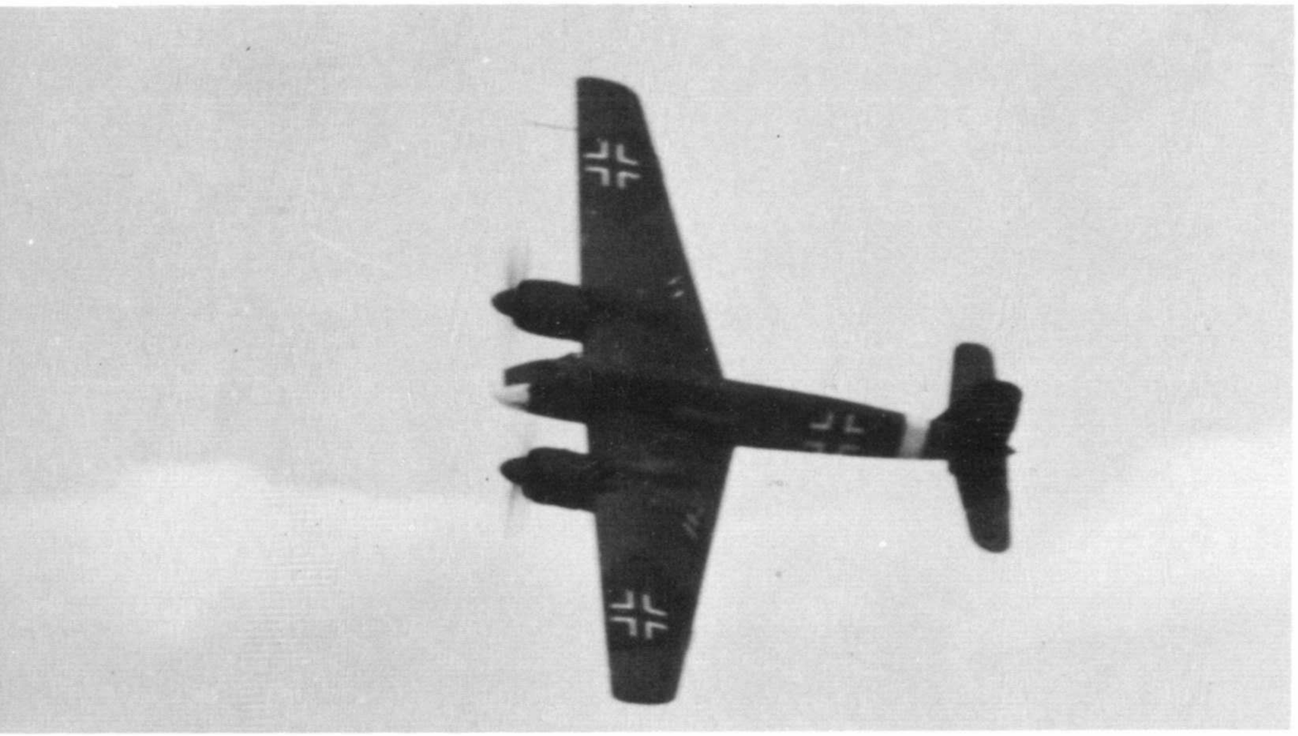
A fine shot of an **Hs 129B-2/R2** of **Schlachtgeschwader 1** bearing the white-bordered black triangle that identified many ground support aircraft on the East Front. Also visible on the fuselage behind the cockpit is the squadron insignia of the **9th Staffel** (ground attack) of Training Wing 2.

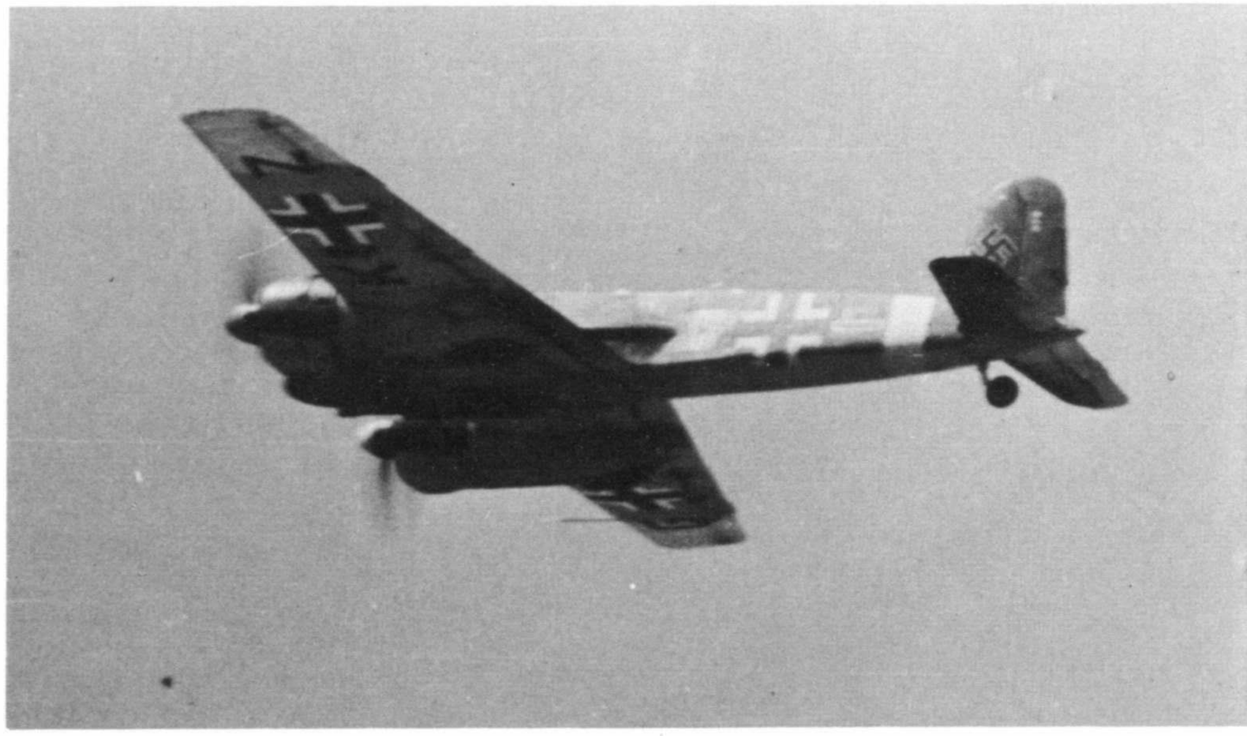


Banking to the left, this **Henschel** prepares to swing into position with his wingman before diving on another enemy position below.

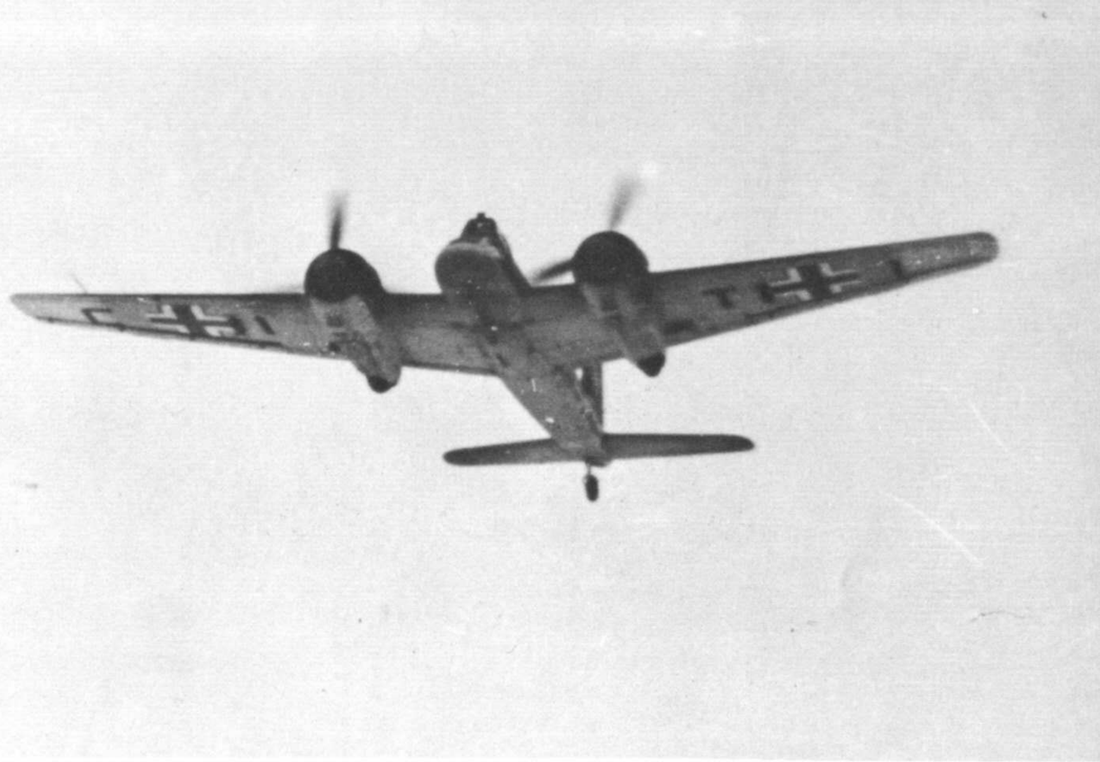
(Below left) A **Henschel** banks to close up with the rest of the formation. She bears the yellow nose and fuselage band, as well as a white-outlined red "W" in front of the national insignia on the fuselage. A close look will reveal the two separate tones of green camouflage paint on her uppersurfaces.

Here, an **Hs 129B-2/R2** bearing a 30mm **MK 103** cannon without its streamlined belly cover banks to the right. This aircraft is from the **9th Staffel (Panzer)** of **Schlachtgeschwader 1** and she shows three tank silhouettes on her rudder scoreboard.



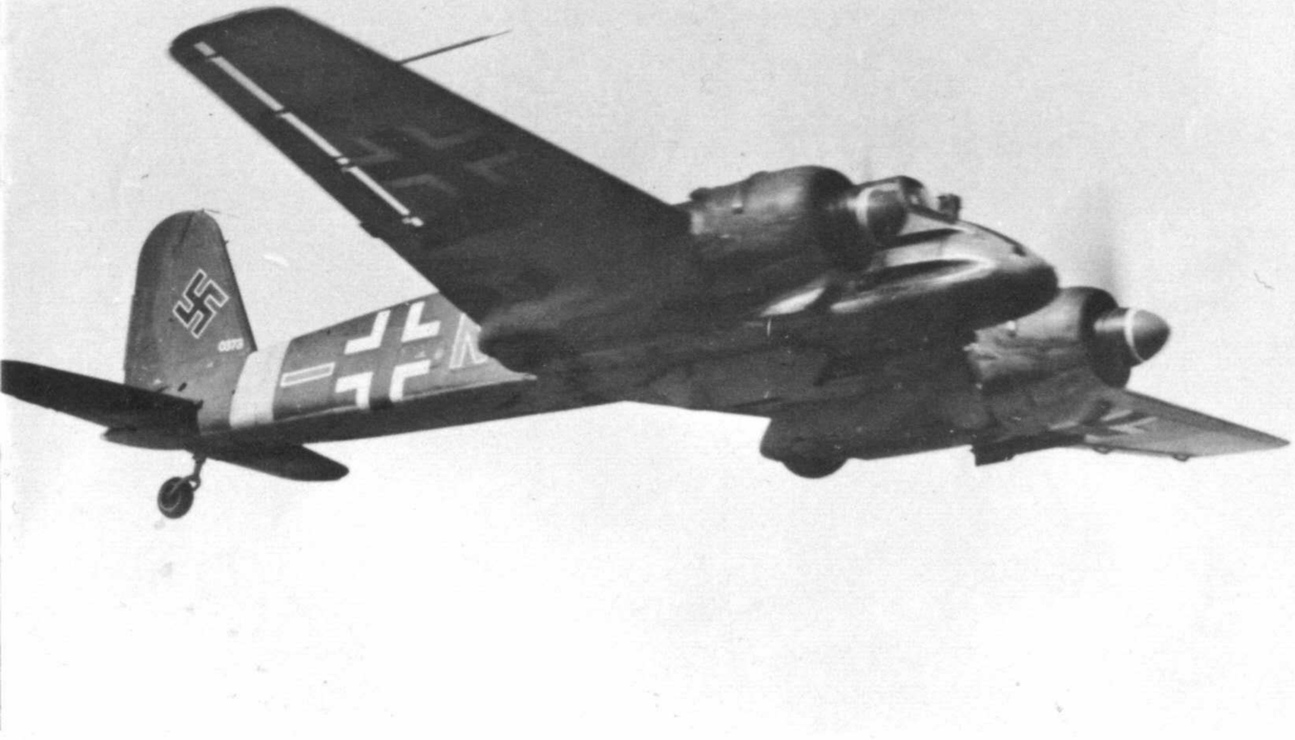


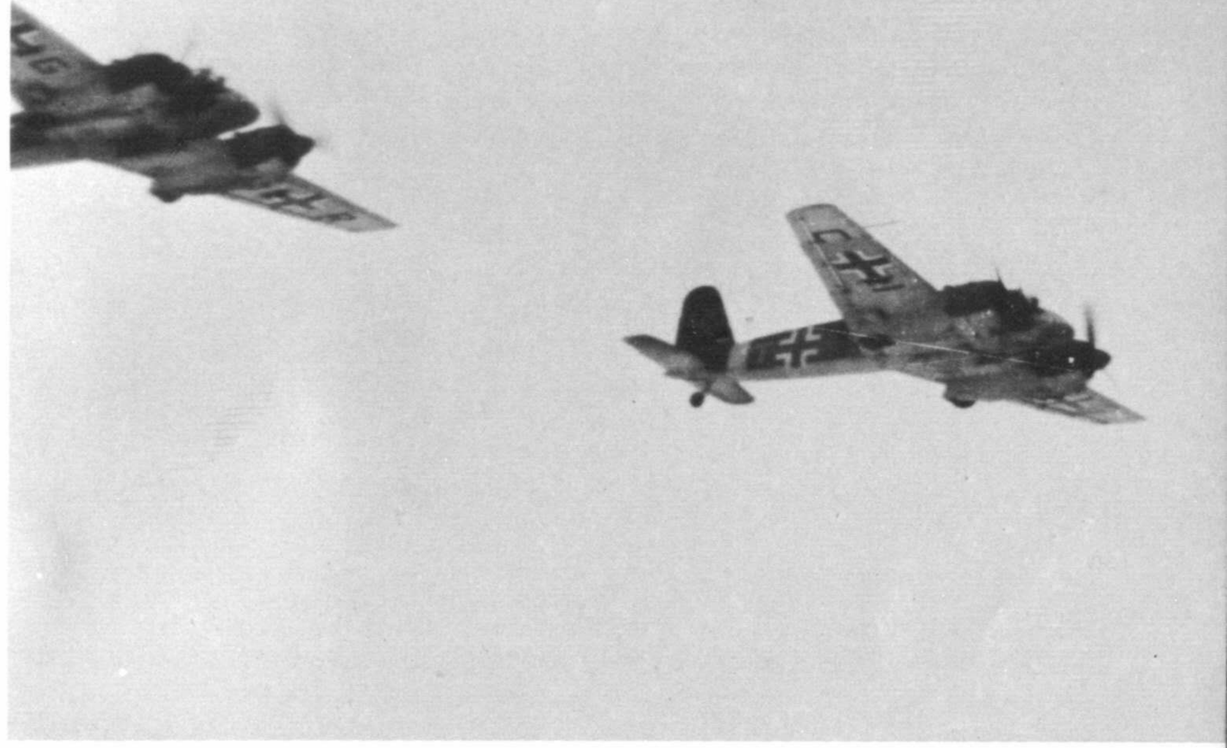
An **Hs 129B-2/R2** flies low over the camera at a forward airfield. When equipped with a belly pack, the **Hs 129** was not a speedy airplane, but this same lack of speed when coupled with the airplane's robust structure and a pilot with a good shooting eye, made the **Hs 129** an extremely accurate shooting platform, and therefore a successful ground attack airplane.



(Below right) A pair of **Hs 129s** with tank-busting equipment fly over. The 30mm and 37mm belly cannon were quite adequate to disable a Russian tank when the shells were placed on the engine covers of the tanks where the armor was not as thick as on the turrets, sides or fronts of the vehicles. Judging from the large number of Soviet tanks destroyed in this manner, the **Hs 129** was quite successful.

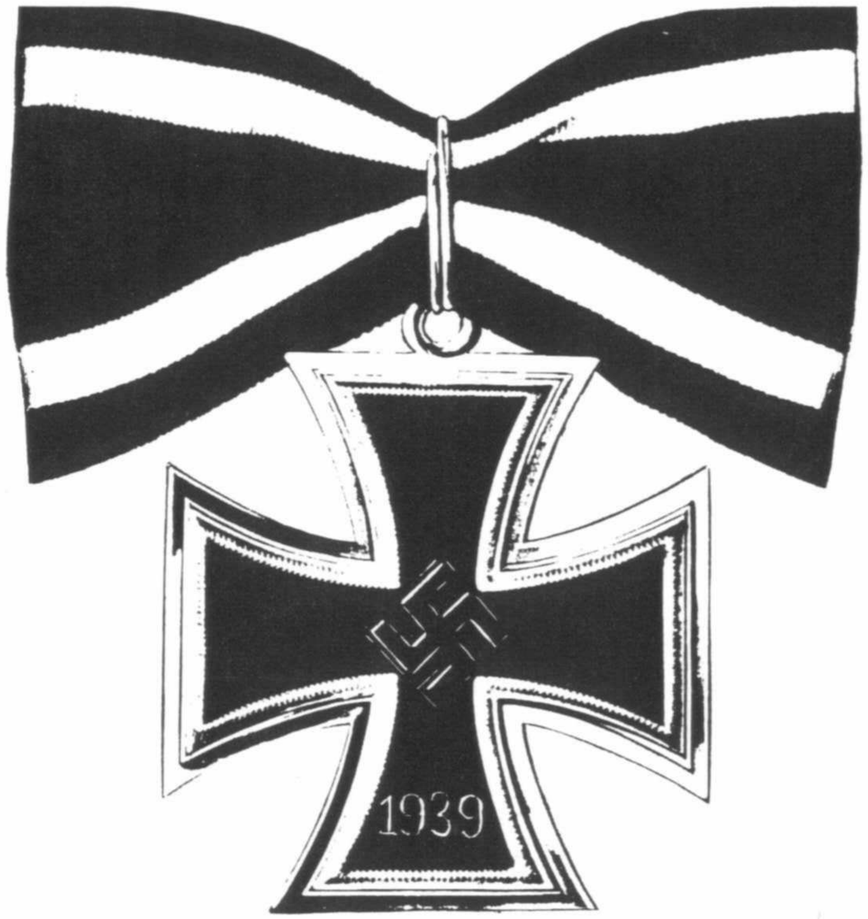
An excellent shot of an **Hs 129B-2/R3** with its belly pack containing a 37mm **BK 3.7** cannon. The airplane bears the markings of the Second **Gruppe** of the **Schlachtgeschwader**, a horizontal bar on the fuselage.





This **Hs 129B-2/R2** features the type of color scheme that was found on most **Hs 129s.** Uppersurfaces were painted in a splinter pattern of dark green and olive green, undersurfaces were in pale blue, and special markings included a yellow band around the rear fuselage to indicate that the aircraft was operating on the East Front, yellow wingtips on the undersurfaces indicating the same thing, and a yellow nose, indicating a ground support aircraft.

The ground crewman in the cockpit of this **Hs 129B** watches the sky overhead as a ground-attack version of the famous **Focke-Wulf FW 190** sweeps over carrying two 100 kg bombs under each wing and an additional 250 kg bomb under the fuselage.



Ritterkreuz zum Eisernen Kreuz

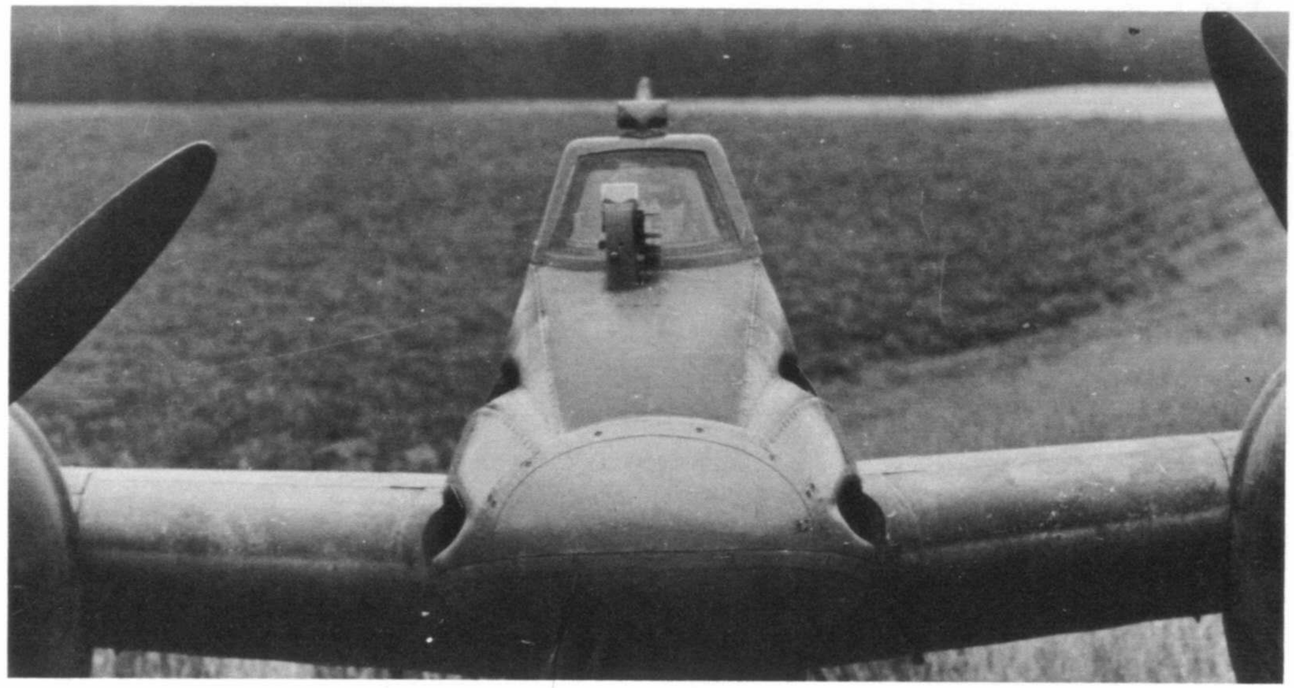
Hauptmann Rudolf Ruffer, Staffelkapitän of 10 Staffel (Panzer), Schlachtgeschwader 9, in the armored cockpit of his Hs 129B-2/R3. Notice the leather-covered crash pad on the inside of the armored windshield. The windshield's armored glass was over one inch thick. As an Oberleutnant, Ruffer was awarded the Knight's cross of the Iron Cross after an engagement in which he single-handedly destroyed ten Soviet KV tanks that had broken through the German lines and were about to encircle and wipe out an infantry unit. When he landed after the mission, armorers found that his 30-round 30mm magazine still contained six rounds.

This pilot adjusts the chin strap of his flight helmet as he snuggles into the curved armored seat. The **Revi C 12/C** reflector gun sight was mounted outside of the cockpit canopy simply because there was not enough room for it inside. This proved to be a detriment in the cold Russian winters, because the reflector would ice over when the aircraft was in flight.

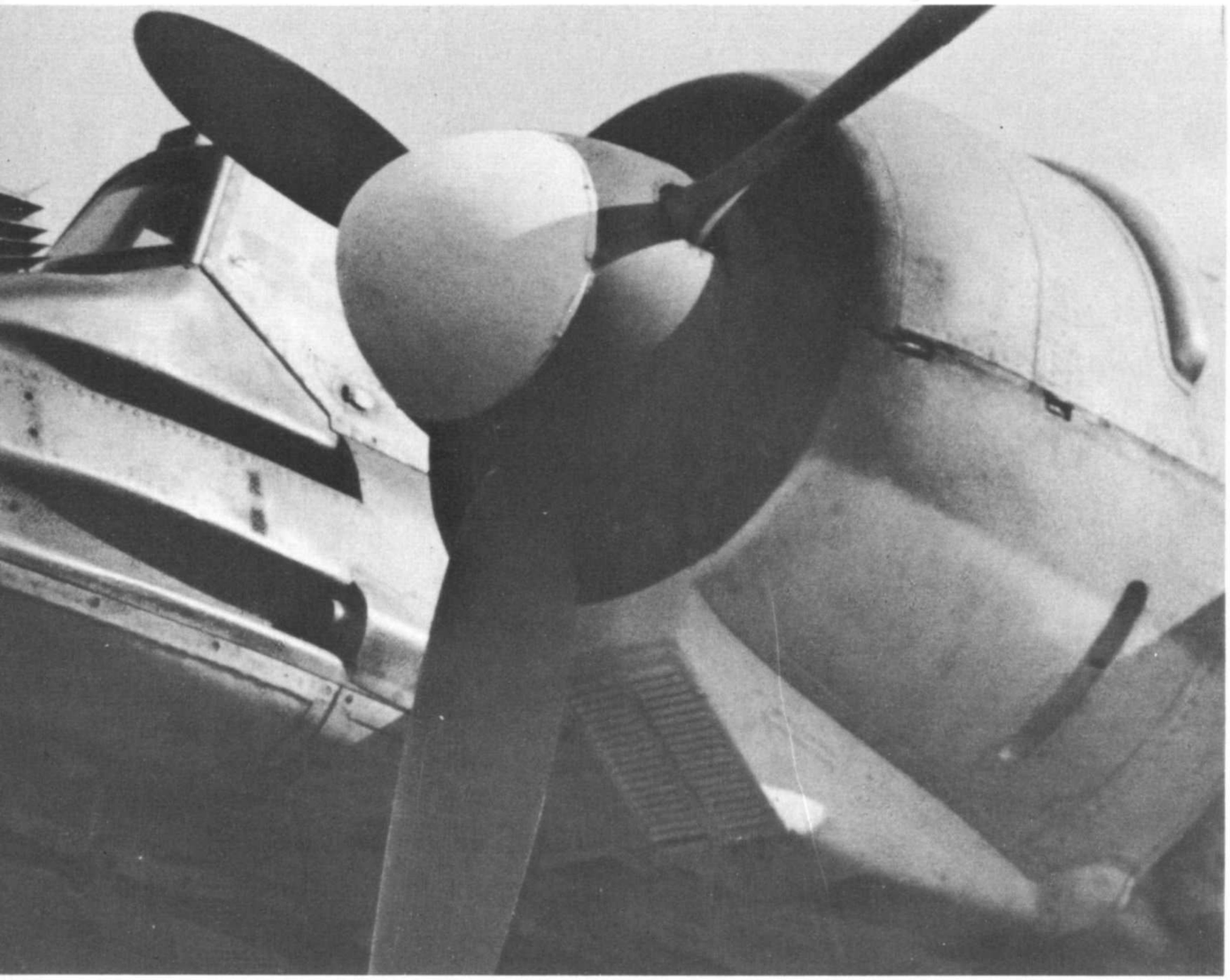
Luftwaffe mechanics wind the inertia starter crank on the port engine of this **Henschel.** When sufficient speed was built up in the starter flywheel, the pilot engaged the clutch to start the engine.

The end of a successful mission. The grin on this pilot's face as he smooths back his hair indicates that he has destroyed at least one enemy armored vehicle.

A view of an **Hs 129B** without its ventral cannon pack. The internal armament consisted of 2 x 7.92mm **MG 17s** firing through the bottom troughs, while 2 x 20mm **MG 151/20** cannon fired through the top troughs .

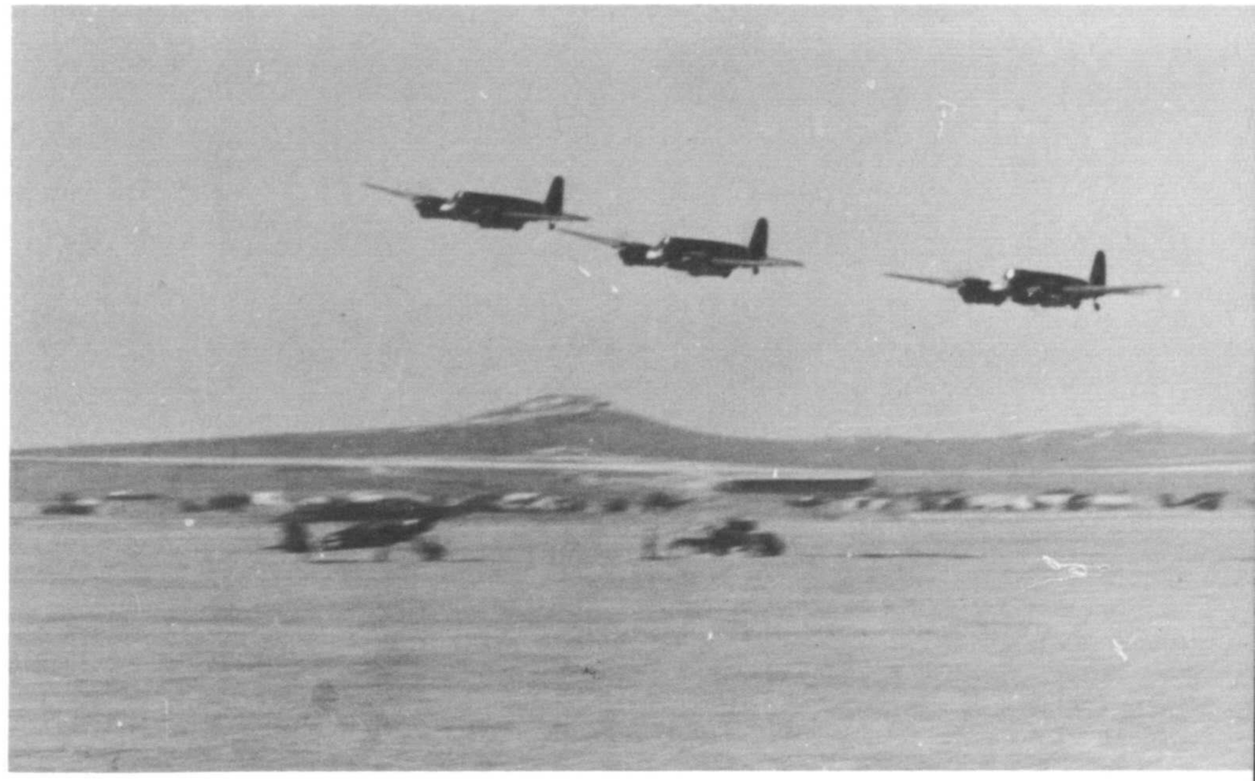


A **Schlachtgeschwader** pilot and a technical non-commissioned officer converse with the crew chief of this **Hs 129B-2/R3.** Barely visible in the photo is the barrel and muzzle brake of the 37mm **BK 3.7** cannon.



Armorers complete the loading of the ventral **MK 103** cannon on this **B-2/R2** of **Schlachtgeschwader 1.** The unique muzzle brake of the 30mm cannon helped to minimize the recoil when the high-velocity armor-piercing projectiles were fired.

A swarm of yellow-nosed **Henschels** sweeps low over an airfield after a successful tank-destroying mission in the Kursk salient during the summer of 1943.



Luftwaffe armorers work on the ammunition feed mechanism of the 30mm **MK 103** cannon that has been swung down for better access. Note the 30mm projectiles hanging down from the breech area of the cannon on their disintegrating link fasteners. The box on the ground under the cannon holds the projectiles when the cannon is swung back up into the belly of the aircraft. The tips of the 30mm projectiles are color-coded to inform handlers of their function. The light-tipped projectiles are high explosive, while the ones with a single white band around the tips are armor-piercing.

Bf 110Cs of the **"Haifischgeschwader"** (shark wing), **Zerstörergeschwader 76**, occupy a forward airfield before the Polish campaign in the autumn of 1939. Other aircraft on the field include **Junkers Ju 52** transports and one **Ju 52** air ambulance, as well as **He 111** bombers and several **He 111s** converted into transports for high-ranking **Luftwaffe** officials.

Messerschmitt

Bf 110

The basis for the creation of the **Messerschmitt Bf 110** was the **Reich Air Ministry's** desire for a long-range aircraft that could accompany bombers to a target and back, defending the bombers from enemy fighters all the while.

Professor Messerschmitt decided on an all-metal airframe with two engines and a crew of two. Development started on the airplane as early as 1934 but vacillations from within the Air Ministry did nothing to help the aircraft's development. At this time a feud had been developing over whether Germany should develop an entirely strategic or a tactical air force. Some of the top military thinkers wanted a single-engined fighter plane to do the job the **Bf 110** was being developed for. Others, including Herman Göring, wanted a twin-engined aircraft.

Five years later the feud had been all but settled. Germany would have a chiefly tactical air force. but they would have a twin-engined **Bf 110**, too. The **Bf 110** was ready to participate in the Polish campaign and it blooded itself on the unprepared and antiquated Polish Air Force.

The **Bf 110** also saw action against the numerically inferior Norwegian Air Force and easily handled any Norwegian opposition.

France, on the other hand, was a different matter for the **Luftwaffe.** During this campaign the Germans faced relatively modern aircraft for the first time and it became rapidly apparent that the twin-engined **Bf 110** was too slow and unmaneuverable to hold its own against modern single-engined fighter planes. From 1940 on, the **Bf 110's** air-superiority day fighter role decreased.

More than in any other campaign, the Battle of Britain spelled doom for the **Bf 110** and by the time the conflict was over, the aircraft had been virtually removed from the skies; first, by the British, and then by the **Luftwaffe.**

There were other roles for the **Bf 110**, and she filled them well, as a reconnaisance aircraft, as a fighter-bomber, and the **110** regained her fame as a radar-bearing night fighter and performed this duty well enough to warrant continued production until the end of the war.

A total of almost 5800 **Bf 110s** were built in all configurations during the war, and at least one is known to have escaped the scrap-heap; it is resting today at RAF Station, Biggin Hill.

The Group Adjutant of the **II Gruppe** of **ZG 76**, a captain, is helped into his parachute by two members of the ground crew. The one piece flying suit was khaki in color and was also worn by bomber crew personnel as well.

Technical Data Bf 110C-1

Engines:.... (2) **DB 601-A** liquid-cooled 12 cyl. inverted vee, 1,050 h.p.
Armament:

2-20 mm **MG FF** cannon w/180 r.p.g.
4-7.9 mm **MG 17** machine guns w/1,000 r.p.g.
1-7.9 mm **MG 15**, in flexible mount, w/750 rounds

Performance:

Maximum Speed: ..... 336 m.p.h. @ 19,000 ft.
Cruising Speed: ..... 304 m.p.h. @ 16,000 ft.
Range: ..... 528 miles @ 16,000 ft.
Service Ceiling: ..... 32,000 ft.

Weight:

Empty: ..... 9,755 lb.
Loaded: ..... 13,289 lb.

Dimensions:

Span: ..... 53 ft. 3¾ in.
Length: ..... 39 ft. 1¼ in.
Wing Area: ..... 413.3 sq. ft.

The two crewmen of this **Bf 110** scramble up to the cockpit. Notice that the pilot is wearing a seat-pack parachute, similar to the kind worn by the pilots of single-engined fighters, while the rear gunner/radioman is wearing a standard back-pack parachute that was worn by most bomber crews. This is because the front seat of the **Bf 110** had a deep bucket seat, making the use of a seat-pack necessary, while the cramped conditions and the folding back seat made the wearing of a back-pack parachute necessary in the rear cockpit.

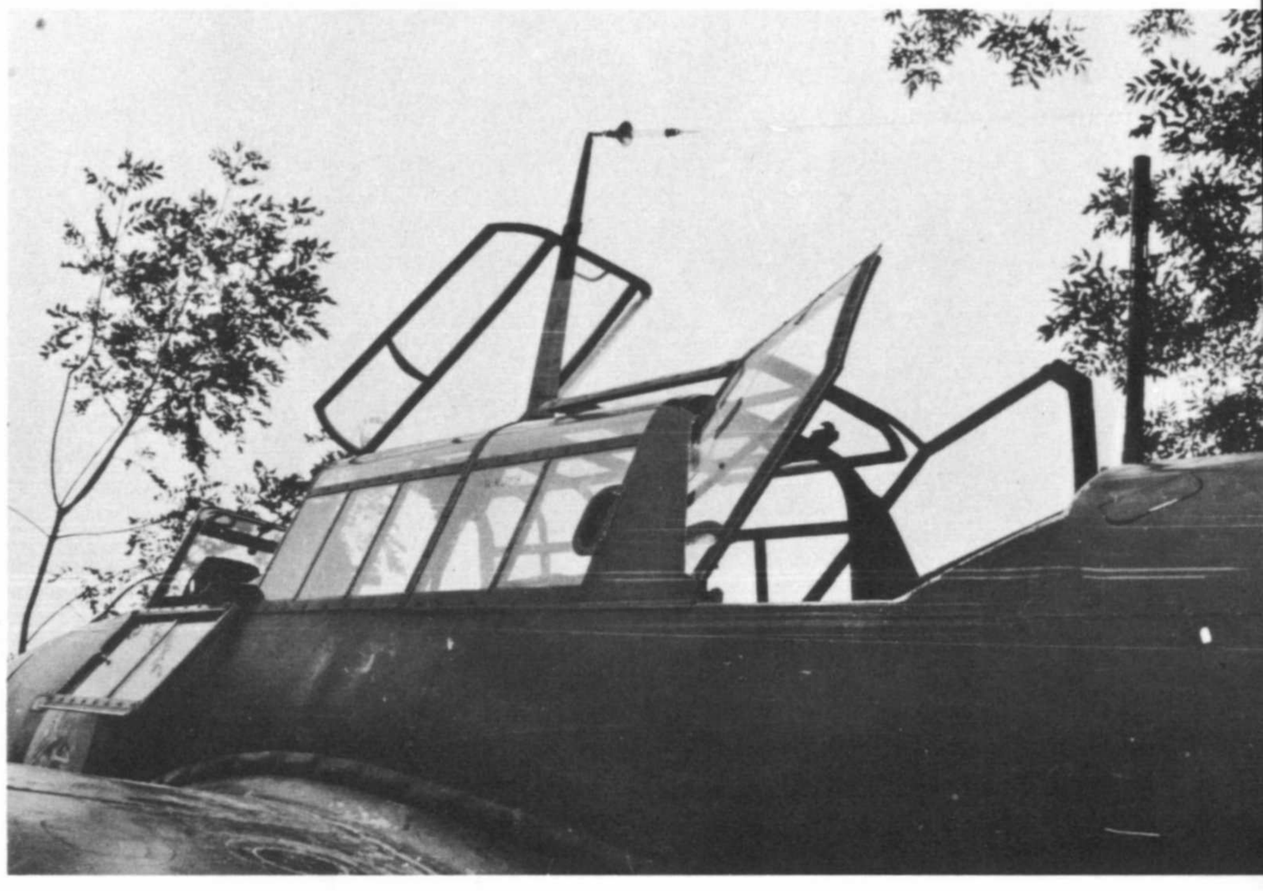
The pilot and his radioman/rear gunner look over a map of of the area they will be flying over just prior to leaving on their mission. The aircraft is a **Messerschmitt Bf 110C-1** heavy fighter.

M8+DK, a **Bf 110** of **ZG 76** in repose at a German airfield just prior to the opening of the 1940 campaigns that saw the **Luftwaffe** smash Belgium, Luxembourg, Holland, Denmark, Norway and France.

The adjutant of **II Gruppe, ZG 76** enters the cockpit of his **Bf 110** heavy fighter. Barely visible in the rear cockpit is the rear gunner's single **MG 15** machine gun with its ring sight.

In this photo, the adjutant of **II/ZG 76** reaches for the canopy side panel in order to swing it up to its closed position. In an emergency, the top of the canopy, shown folded back, could be jettisoned to allow an easy exit of the pilot.

The greenhouse of a **Bf 110C**, showing all of the moveable windows and hatches in their open positions. The squadron insignia under the pilot's forward cockpit shows that the aircraft is one belonging to the first **Staffel** of **Zerstörergeschwader 2.**



Ground crewmen assist the pilot of this **Bf 110F** into his aircraft. The insignia on the nose is that of the German night fighter arm, originally that of **Nachtjagdgeschwader 1.**

The pilot and rear gunner/radioman of this **Bf 110** are wearing the typical small tinted-lens goggles that were worn by German aircrew members throughout the war. Another part of their flight gear is the cork-filled "sausage link" life jackets that were later supplanted by the inflatable type.

(Right) An interesting shot of the pilot at his controls, taken from the radioman's seat in the rear. Note the auxiliary set of flight instruments; the artificial horizon, altimeter, airspeed indicator and chronometer.

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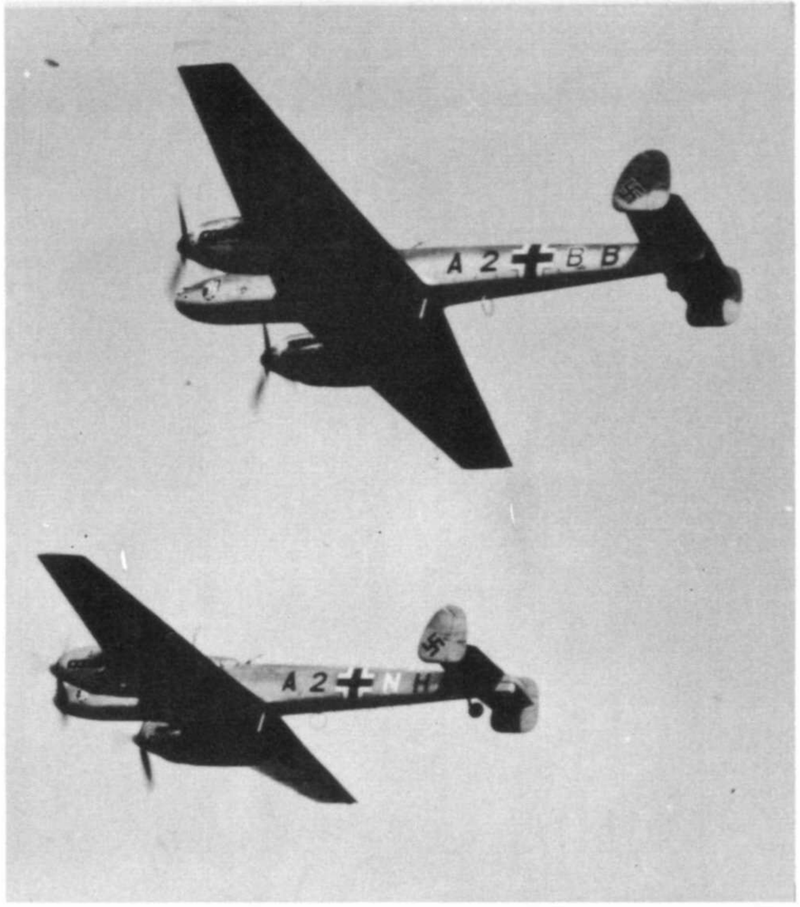
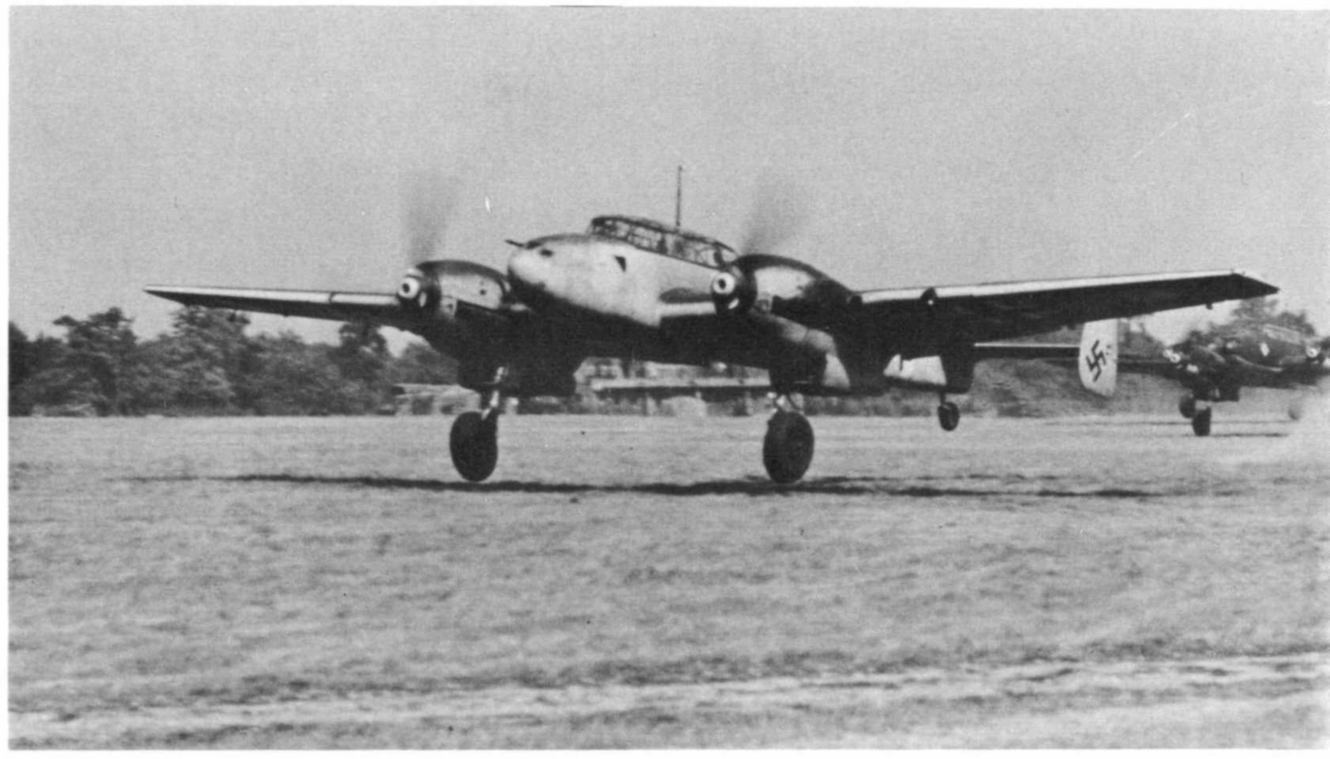


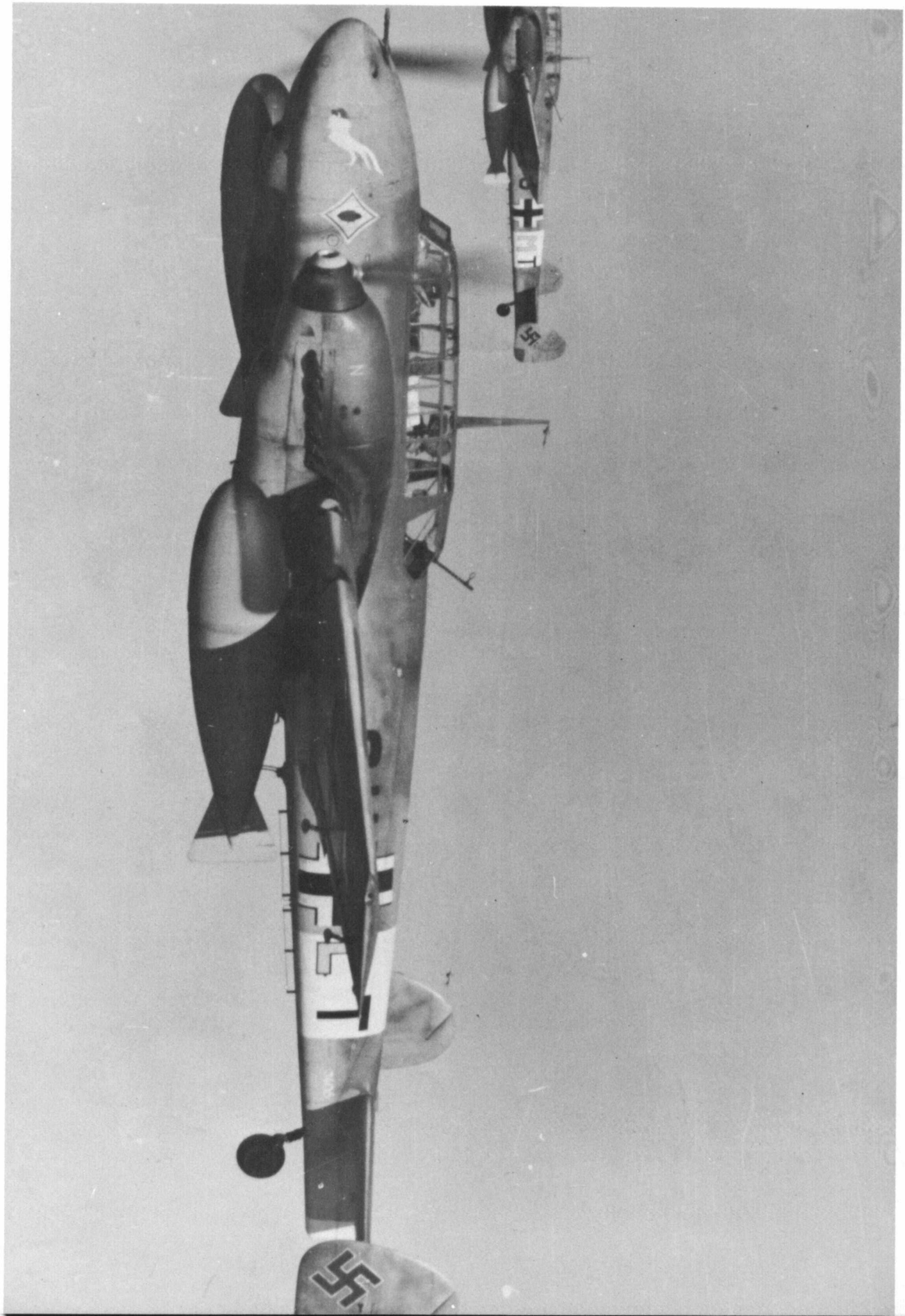
A fine view of a pair of **Bf 110Cs** of the first **Staffel** of **Zerstörergeschwader 52** taken during the height of the Battle of Britain in late 1940. These aircraft were based in France.

(Above right)
An excellent shot of a **Bf 110G-2** heavy fighter carrying an additional belly gun pack with twin 30mm **MK 108** cannons to double its internal nose armament of 2 more **MK 108** cannons.



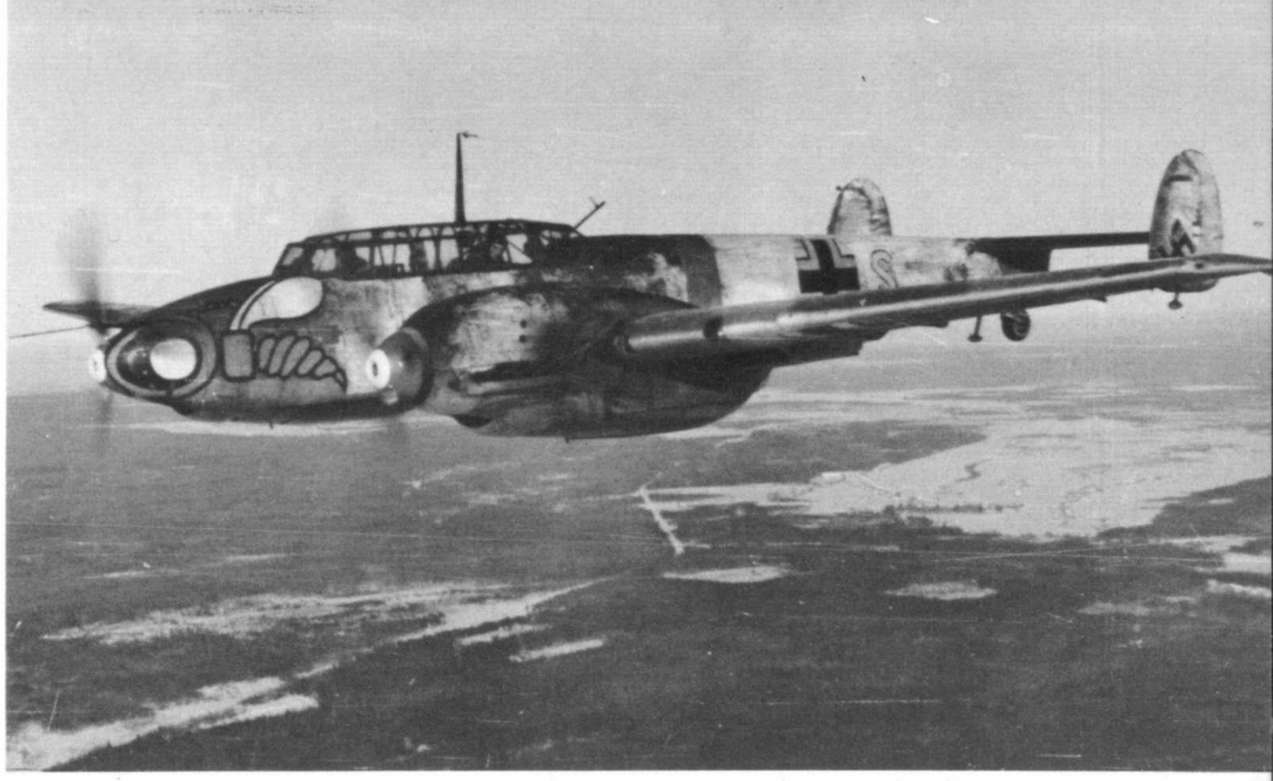
Bf 110Cs lift off a French airfield in September of 1940. Both aircraft are from **Zerstörergeschwader 26**, while the darker colored aircraft on the right wears the squadron insignia of the **5th Staffel** of **ZG 26.**

This photo shows a pair of **Bf 110Cs** carrying long-range drop tanks on escort duty over the Mediterranean in 1941. The aircraft in the foreground bears two insignia; the crowing rooster of the **9th Staffel** of **ZG 26**, and the June-bug of the **III Gruppe** of **ZG 26.**



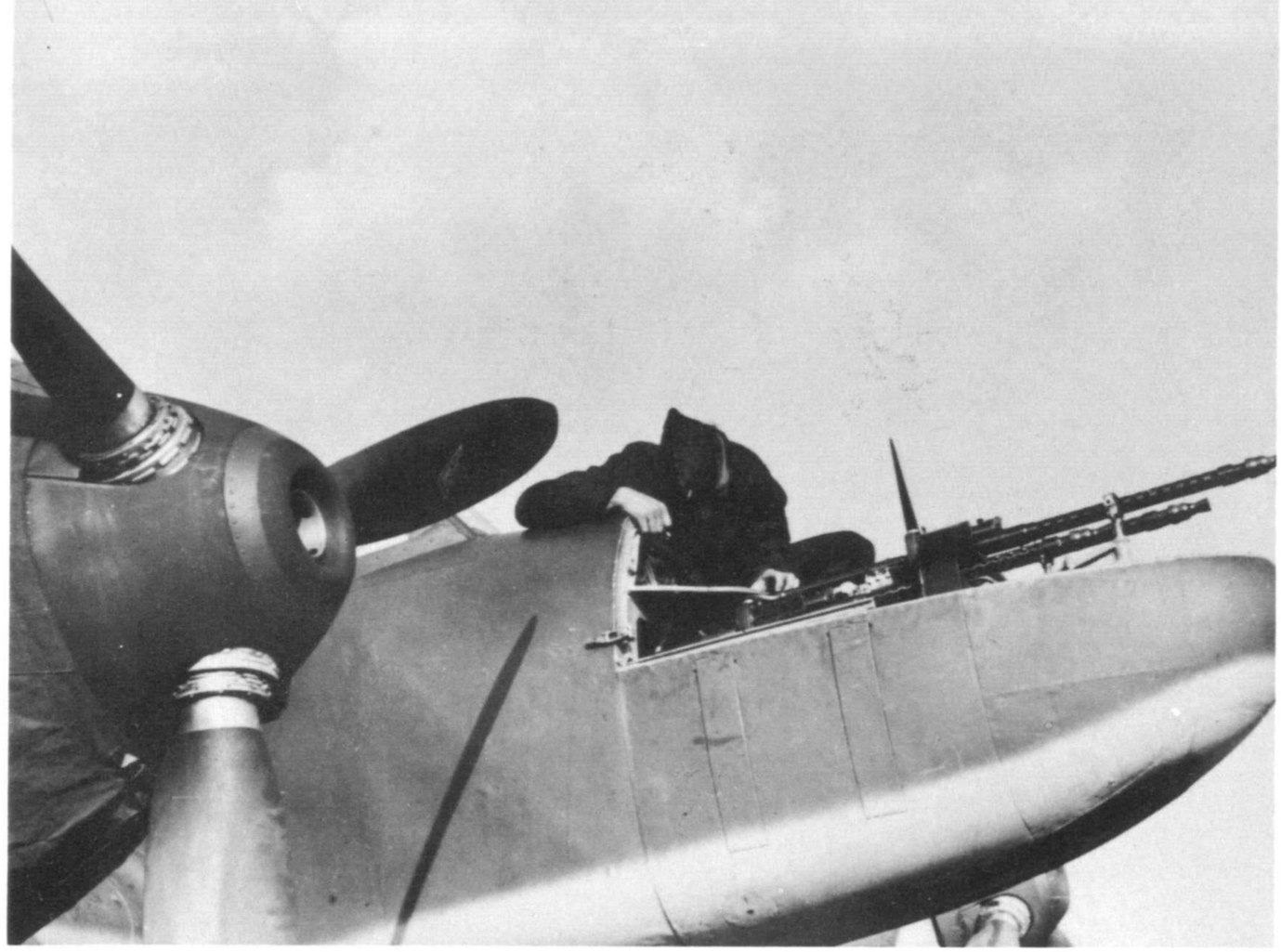
Ground crew and air crew take a break from the hot desert sun beneath the wing of this bombed up **Bf 110** of **Zerstörergeschwader 26**.

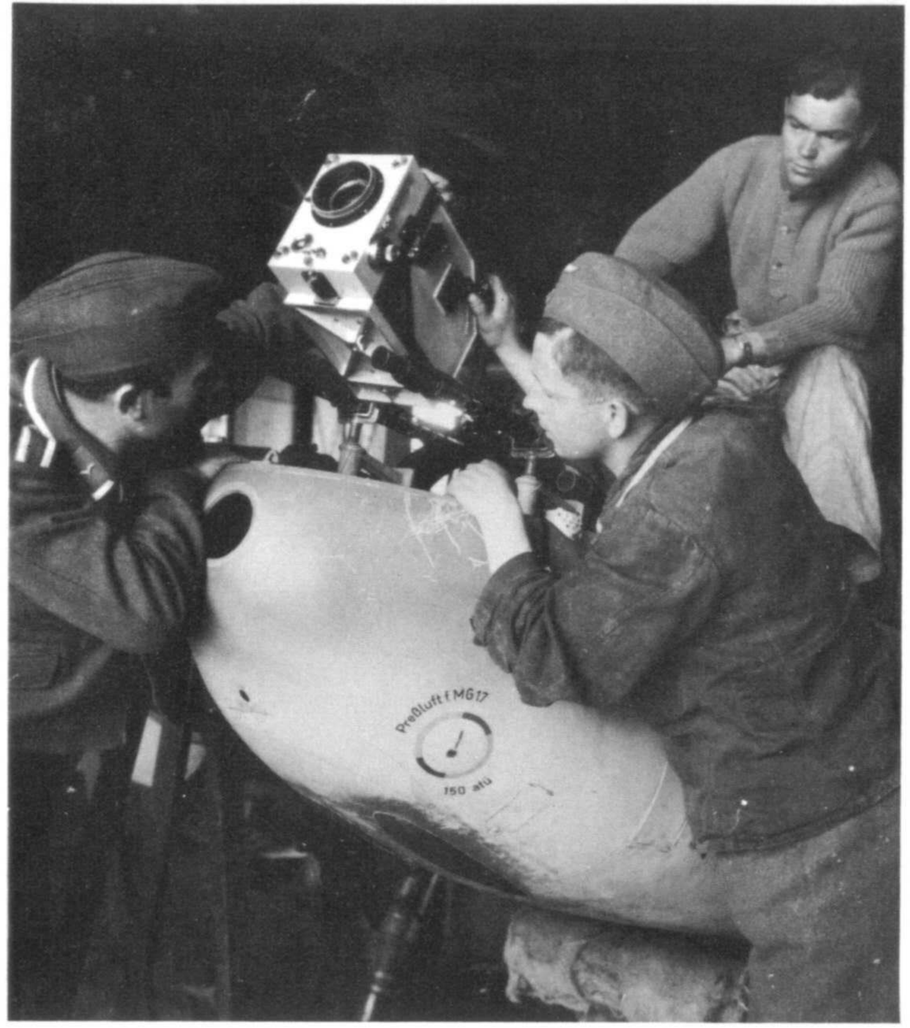
This **Bf 110C-4b** in faded winter camouflage bears the yellow fuselage band of most East Front aircraft and the unique wasp nose insignia of **Zerstörergeschwader 1**, the Wasp Wing.



(Below right) This **Bf 110G** of a night fighter squadron has been covered to protect it from the elements. The nose armament area, cockpit greenhouse and both engines have been covered.

Another view of the same **Bf 110G** covered from the elements. This view reveals that the aircraft's wings have also been covered. This is an aircraft of **NJG 5.**



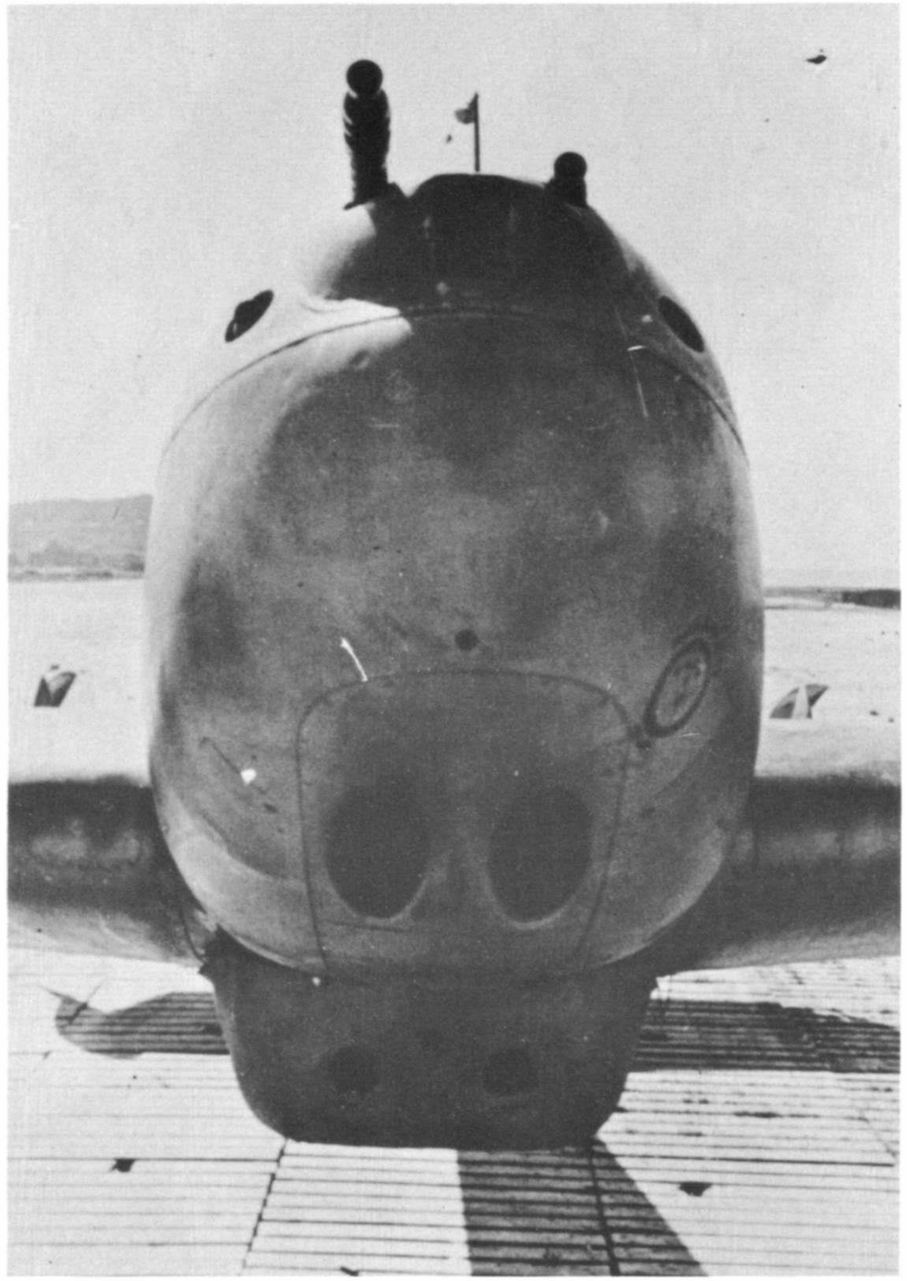


Here, a black-uniformed mechanic finishes loading the four **MG 17** 7.92mm machine guns in the nose of this **Bf 110C.** Note how the engines were covered with canvas to protect them all the time they were not in use.

(Above right) **Luftwaffe** armorers replace the automatic gun camera between the **MG 17** gun barrels in the nose of the **Bf 110C.** The hole in the nose is where the camera lens shows through and is quite visible in the photo.

(Right) This **Bf 110C** experienced a rather hard landing on a desert airfield in Lybia. **Luftwaffe** ground personnel have already begun reclaiming the aircraft and her fuselage has been raised and held in place by the large stepladders so that the tail surfaces will not get damaged.

(Left) This desert based **Bf 110** carries a nose armament of 4 x 13mm **MG 131** machine guns; a deviation from the standard armament of 4 x 7.92mm **MG 17** machine guns.

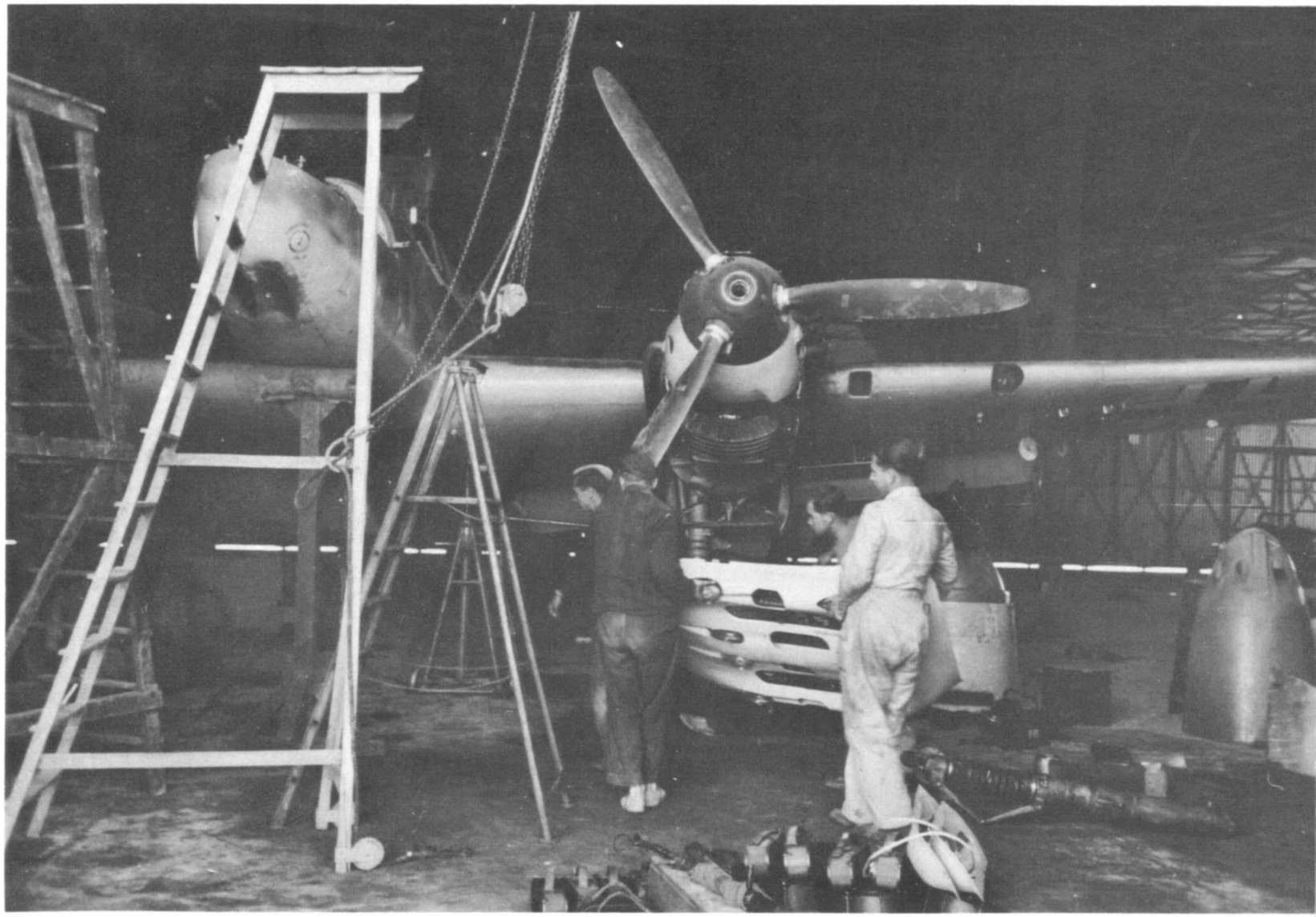


The nose of a heavily armed **Bf 110G**, showing the barrels of the four **MG 17** machine guns and the belly gun pack, containing twin **MG 151** 20mm cannons.

A ground crewman tops up the oil in the oil tank of the big **Daimler-Benz DB 601** engine of this **Bf 110**. The **Daimler-Benz DB 601** engines of the **Bf 110** put out a combined total of 2700 horsepower on takeoff.

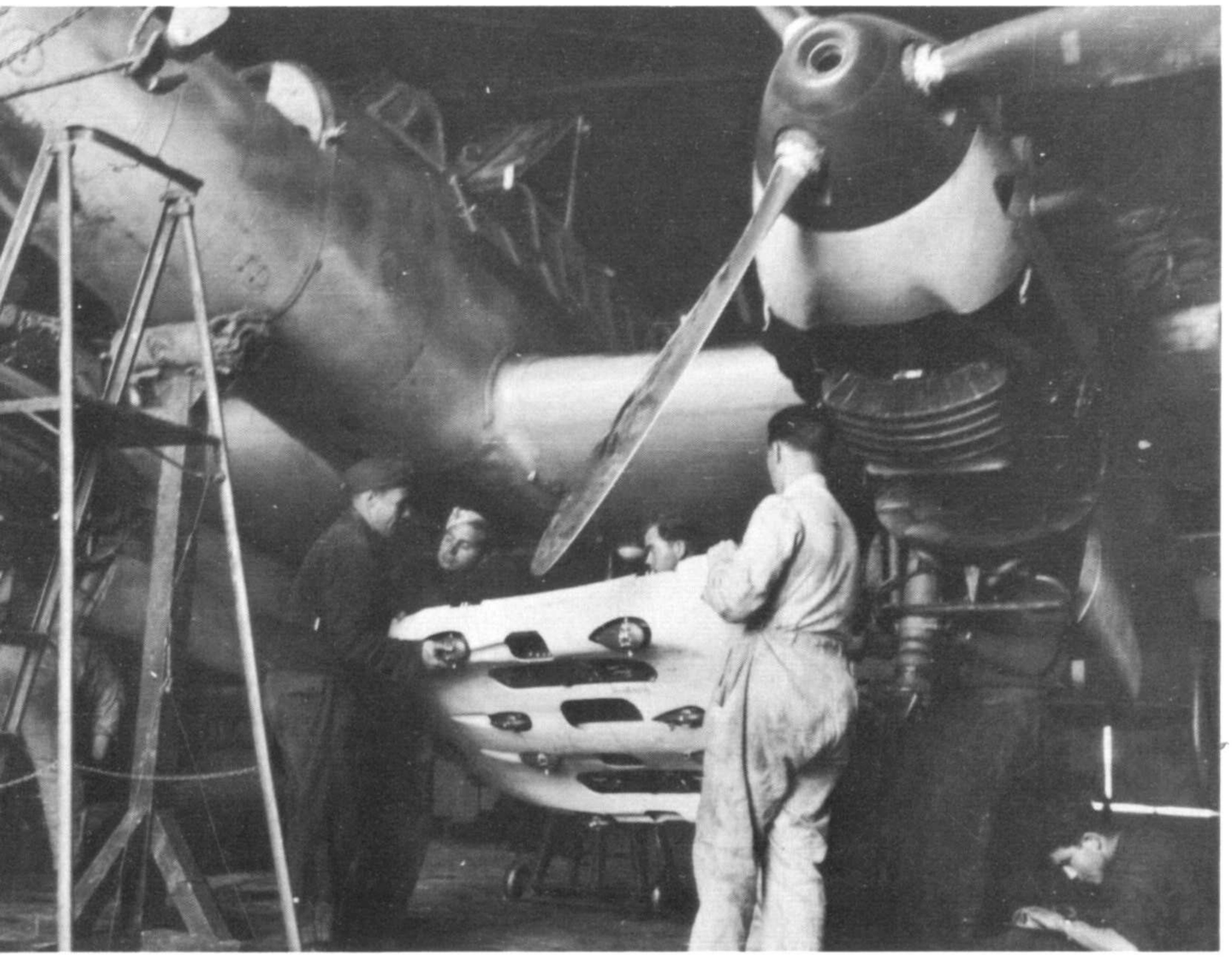
This crewman has just replaced the oil tank drain plug on the **DB 601F** engine prior to filling the oil tank with fresh oil.

In this view, armorers carry a large paired **ETC 250** bomb rack toward the waiting belly of this **Bf 110**, which has been placed on jacks for that purpose.



Here the armorers have succeeded in fitting one side of the large bomb rack. By pushing the rack upwards and flush with the belly of the aircraft, the armorers can insert the bolts into their lugs and secure the rack in place.

The twin **ETC 250** bomb rack changed the standard **Bf 110C** fighter into the **Bf 110C-4/B** heavy fighter bomber. The **Bf 110C-4/B** proved to be quite effective as a fighter-bomber with 4 x **MG 17** machine guns and 500 kg of bombs.



Messerschmitt Bf 108 "Taifun"

In 1934 Professor Willi Messerschmitt produced what was to be a revolution in aircraft design. His product was originally called the **M 37**, but it was later renamed thc **Bf 108** by the German Air Ministry.

The **Bf 108** possessed so many modern design features that it was to be the grandfather of virtually all modern single-engined pleasure aircraft. Some of the more revolutionary features incorporated into the **Bf 108** were split flaps, leading edge slots and a retractable main landing gear. The aircraft's all-metal construction was also a harbinger of methods that would be used in the future.

A total of 885 aircraft of this designation were built and after the end of the war, another 285 aircraft were built by the French firm of **S.N.C.A. Nord**, being redesignated **Nord 1000 "Pingouin"**.

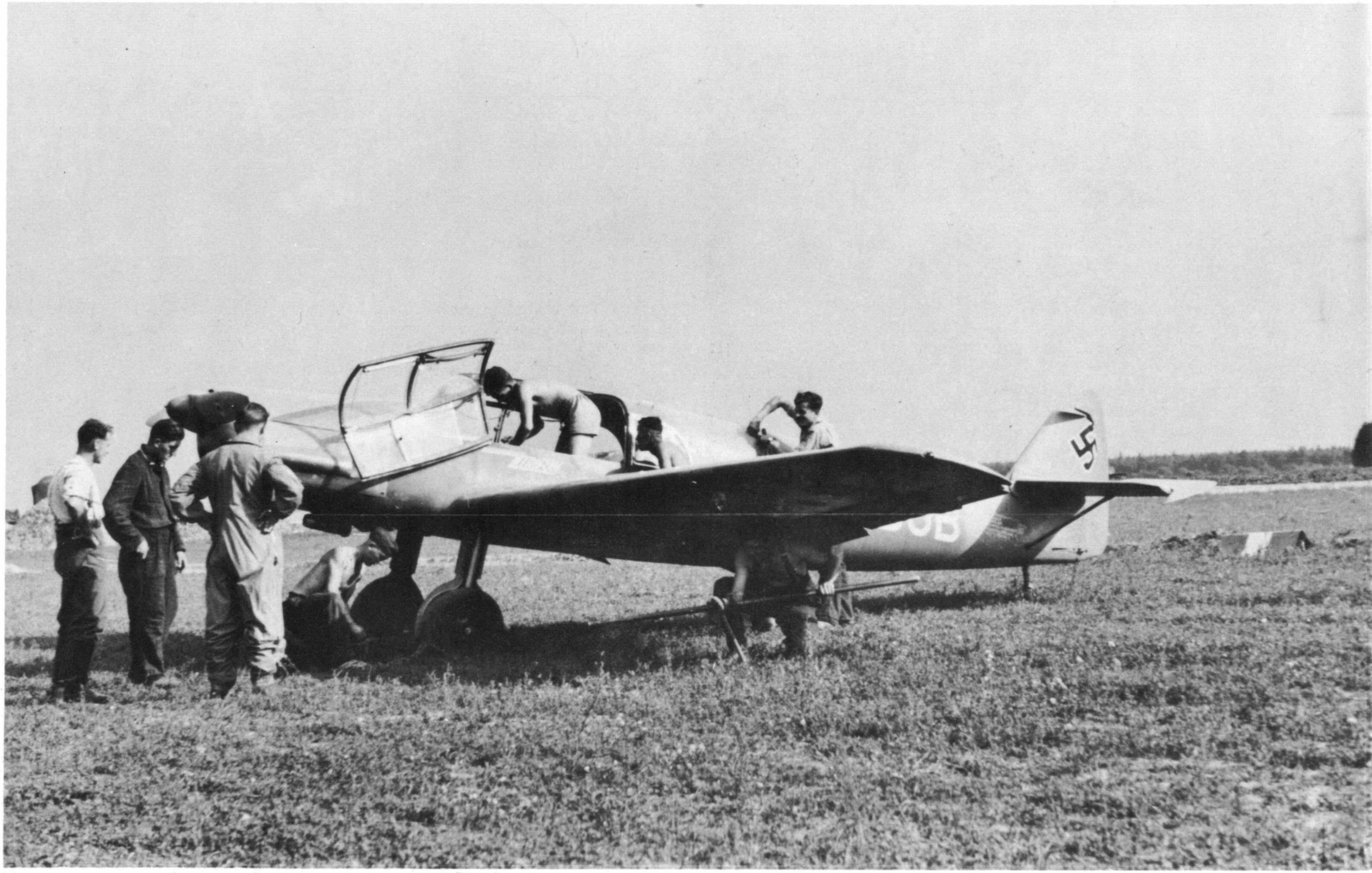
The **Bf 108** was built in three major versions:

Bf 108A First produced in 1934 under the designation Messerschmitt **M 37**. A four-seat pleasure aircraft, fitted with a **Hirth 8 U** engine that produced a total of 250 horsepower.

Bf 108B The standard **Luftwaffe**-approved version; fitted with an **Argus As 10 C** engine. This version was slightly larger in all dimensions than the **A** version. It was used as a liaison aircraft, personal transport, and as a transition trainer for pilots earmarked for the **Bf 109** fighter plane.

Bf 108C In 1941, Messerschmitt wanted to add a larger engine to the **Bf 108's** airframe in order to increase its speed and performance. The engine used was a **Hirth HM 512**, a twelve-cylinder air cooled engine that produced 400 horsepower. It utilized a variable-pitch propeller. Only several aircraft were fitted with the big **Hirth** engine.

A **Luftwaffe Bf 108B** trainer shows off its aerodynamically clean lines. The leading edge slots can be seen on the left wing and the outward folding narrow track landing gear; characteristic of the **Bf 108's** big brother, the **Bf 109** fighter.



In this view a high ranking **Luftwaffe** officer is helped up on to the wing of this **Bf 108.** These aircraft were highly coveted; many of them being used as personal transports by Generals.

(Top right) With one officer in back, another slides into the seat next to the pilot. Very obvious in this view are the open canopy sides that hinged against the windshield; closing to the rear in a clamshell manner.

This **Bf 108B** is shown in an overall dark green colorscheme. The markings on the fuselage side and under the wings indicate that this is an aircraft that has been released from **Air Ministry** livery into the ranks of the **Luftwaffe.**

(Left page) A **Bf 108B** trainer bearing pre-World War Two German civil AND military markings is prepared for a flight. The trademark **"Messerschmitt Taifun"** can be seen below the canopy on the side of the fuselage.

Focke-Wulf FW 58

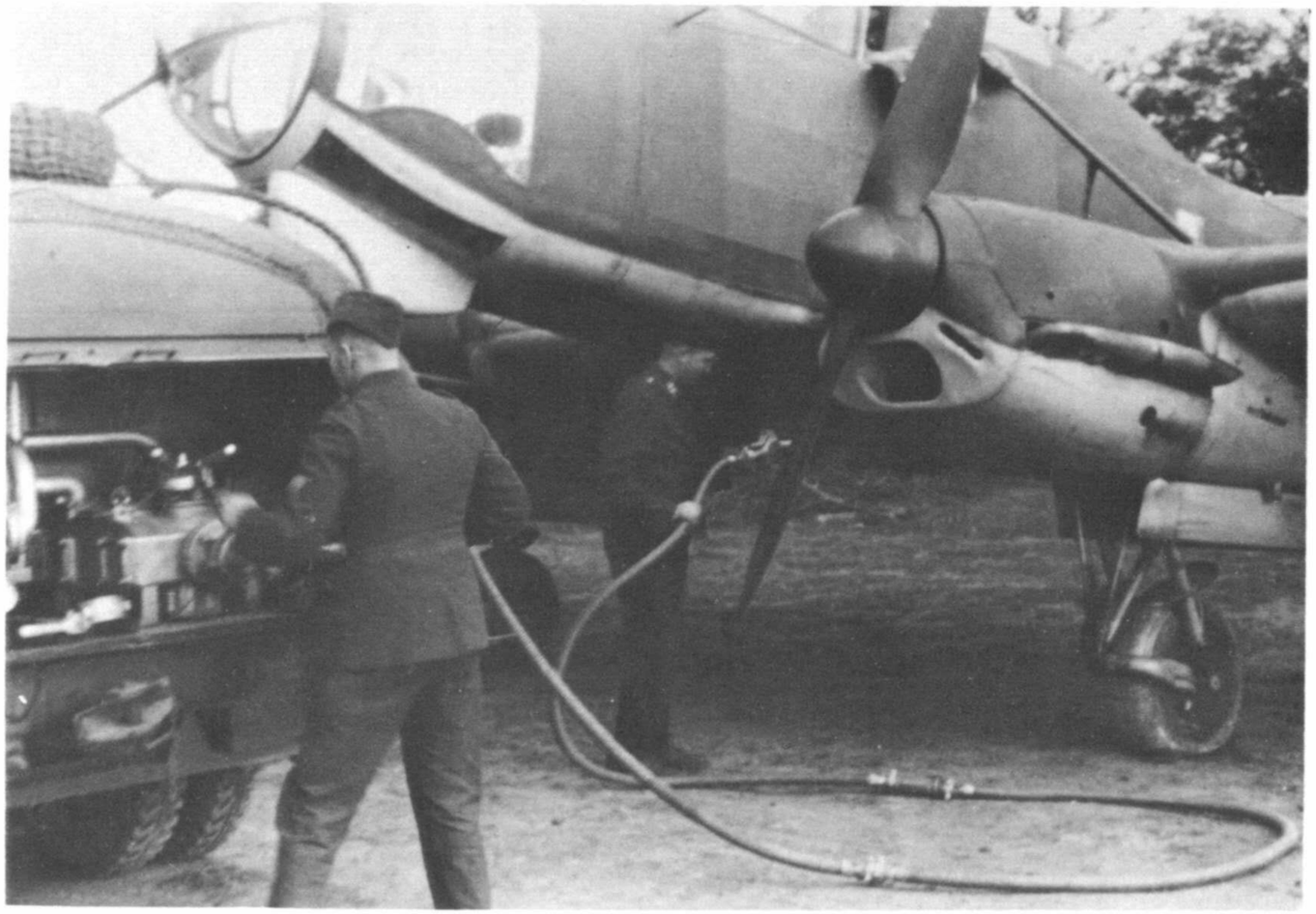
The **FW 58** was a twin-engined development from the drawing board of Dr. Kurt Tank, the designer of the **FW 190** fighter.

This little twin-engined plane proved to be so versatile that it was used throughout the war in a multitude of roles. Built originally as a training aircraft, it was used to train pilots of multi-engined aircraft, to train new bombardiers, to train aerial gunners, and was also used as a blind-flying, or instrument trainer. It also received much use as a personal transport for high ranking officers, as a navigation trainer, and as an ambulance aircraft during the North African campaign. It was used as a light transport, and was used not only by the Germans, but also by the Italians, and the air forces of Hungary, Argentina, Turkey, Sweden, Holland and Brazil.

The **Focke-Wulf FW 58** was built in three different versions. The **FW 58A** featured an open nose position with a forward firing, manually controlled machine gun and an open dorsal machine gun position behind the pilot's cabin. The **FW 58B** differed from the **A** version in that its nose machine gun position was glassed in. The **FW 58C** differed from both earlier versions by having no armament, a solid nose, and a smooth aerodynamic fairing that covered the old dorsal machine gun position.

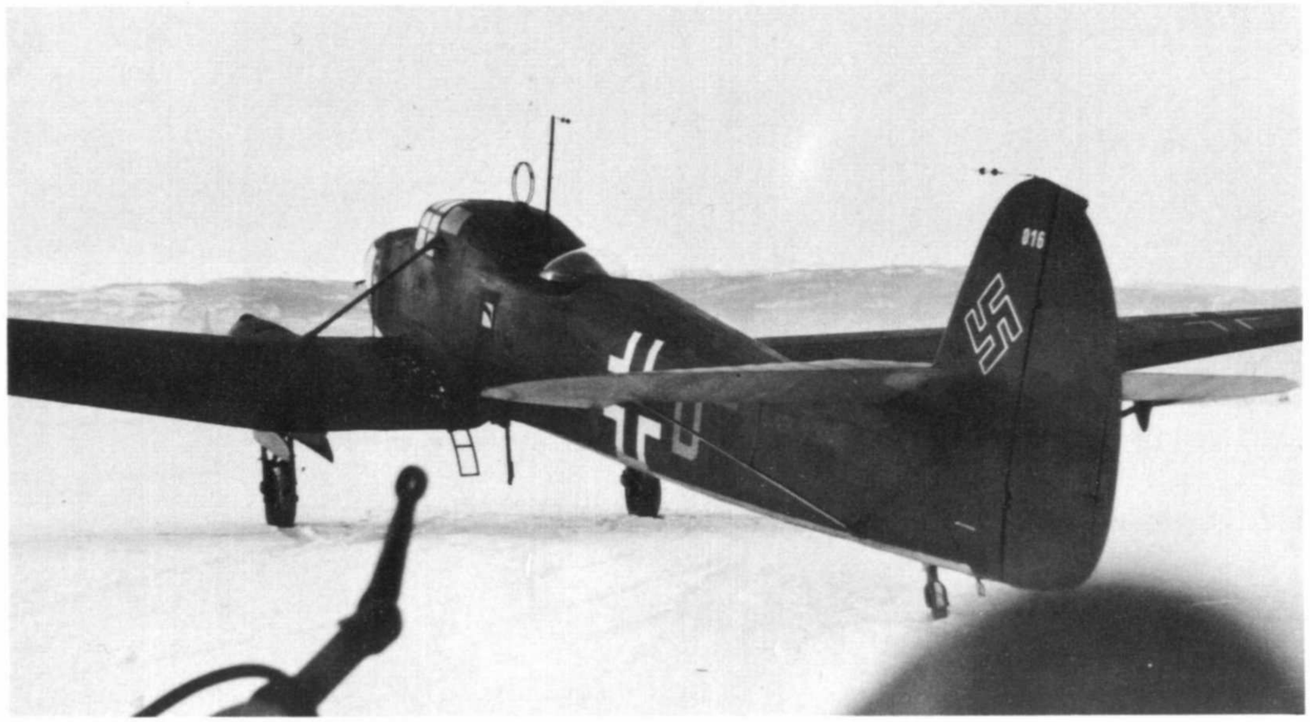
This view shows to advantage the glassed-in nose machine gun position and the fairing containing the bomb sight of this **FW 58B**. The **Argus** engine was capable of putting out 240 h.p. on takeoff.

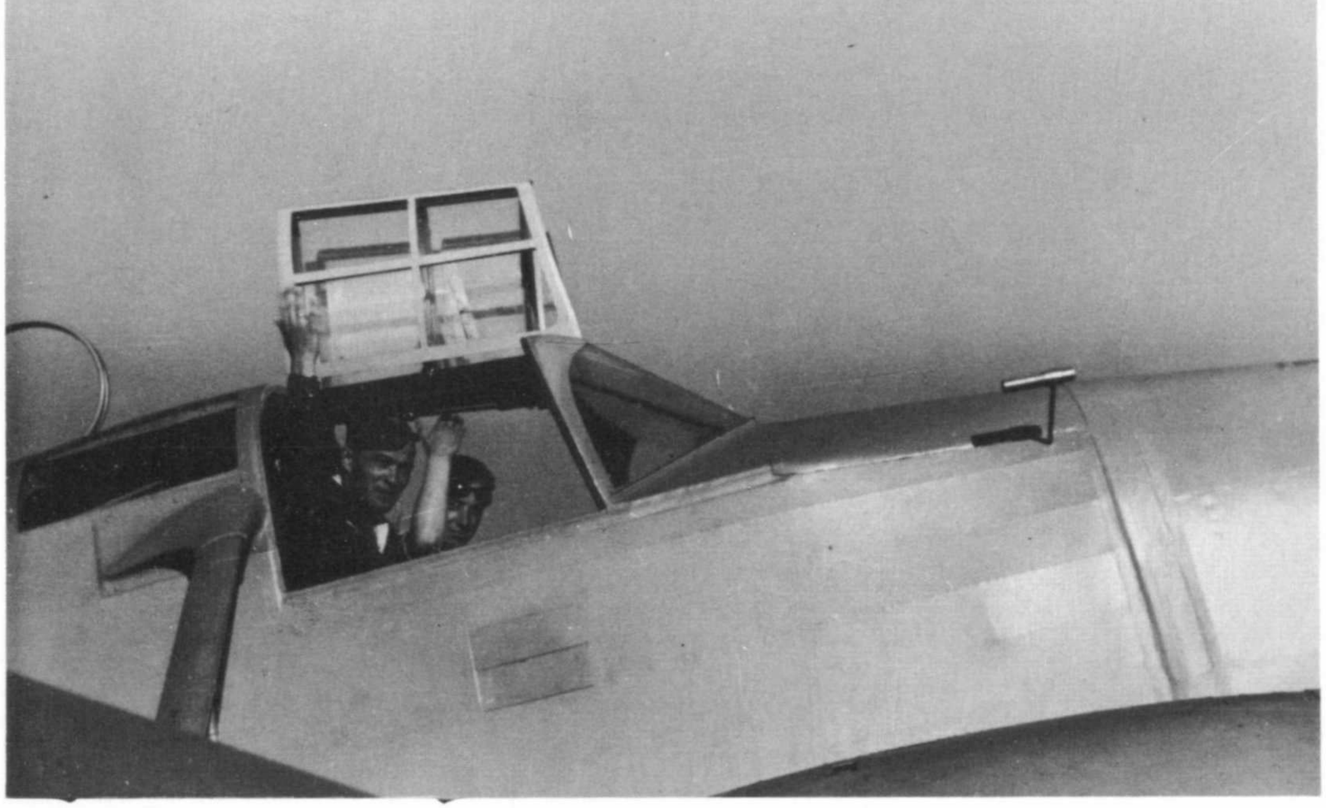
A **Luftwaffe** refuelling crew tops up the fuel tanks on this **FW 58B** trainer. Note the rather dainty rearward-folding landing gear under the **Argus As 10 C** air-cooled inverted vee engine.



A pilot-trainee takes the controls of this **FW 58B** instrument trainer. Visible on the fuselage behind the pilot is the circular radio direction-finding loop antenna; behind that, the antenna mast for the high frequency voice radio.

This **FW 58** starts to taxi out across a frozen runway on a training flight. The plexiglass dome covering the dorsal machine gun turret was put in place only when this turret was not in use.



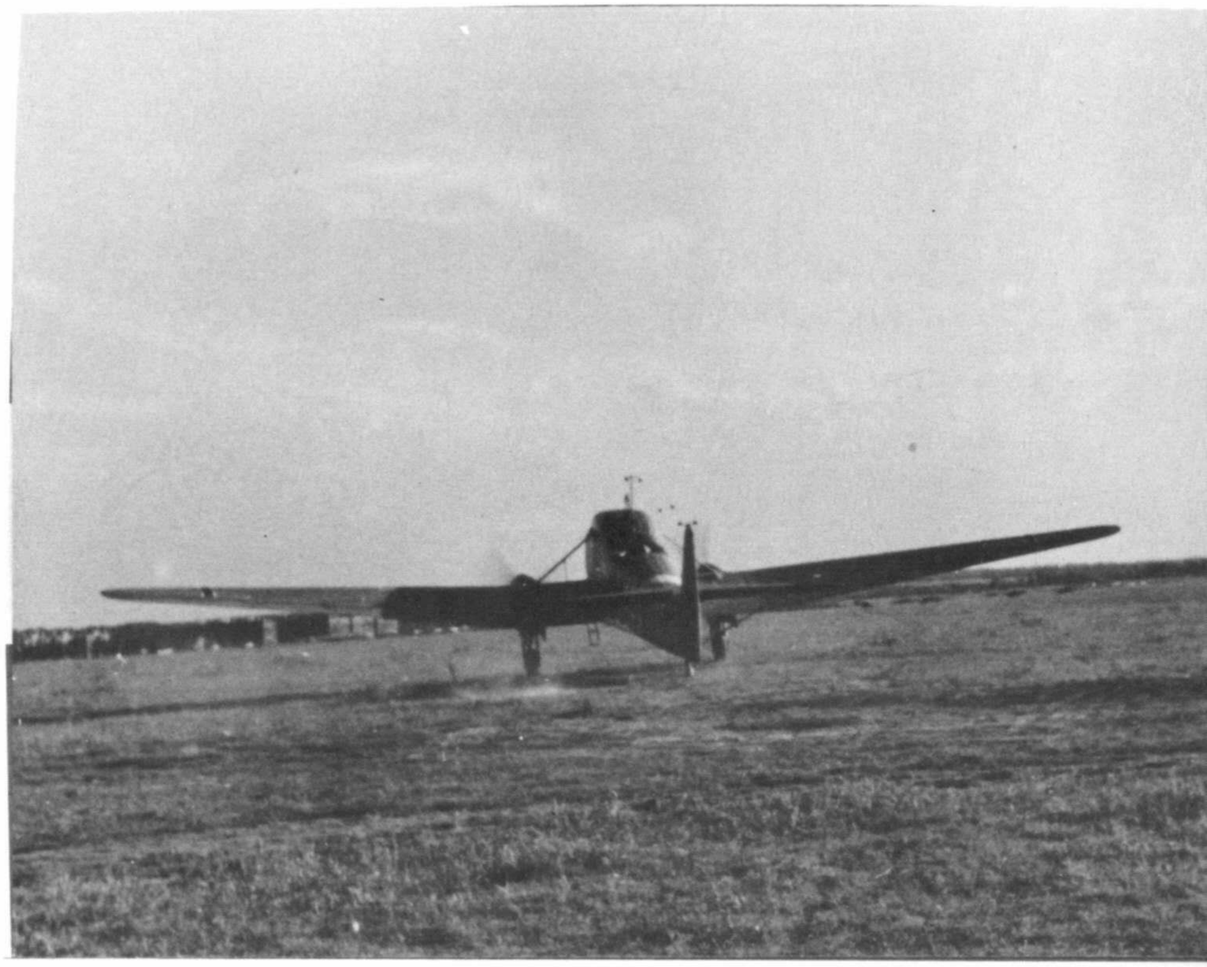


The pilot and trainee in this light grey-green **FW 58B** trainer prepare to button up for a flight. Note the large support running between the fuselage side and the upper surface of the wing on this low winged monoplane. This particular aircraft was used as a transport for the personnel of **Fighter Wing 54** on the East Front.

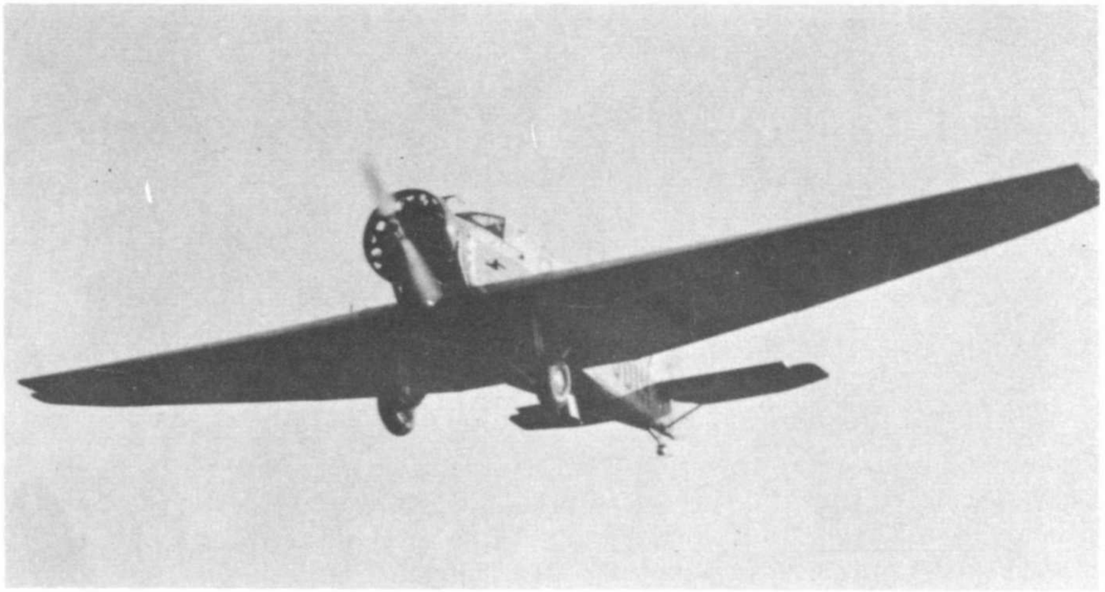
An **FW 58C** throttles back for a landing at an advanced field on the East Front. One of the major distinguishing characteristics of the **FW 58C** was its solid nose, as opposed to the glassed-in nose of the **FW 58B.**

(Below right) With brakes on and throttles all the way forward, this **FW 58B** builds up the RPMs in her twin **Argus** engines before the takeoff. The twin wire "clothesline" antennae are very obvious from this angle.

Here, ground crewmen unload an aircraft tire as part of the cargo of this **Gotha Go 242** transport glider as an **FW 58** waits on its belly in the background with collapsed landing gear. The light grey-green **RLM Grau** paint scheme on the **FW 58** was typical of many **Luftwaffe** multi-purpose aircraft.

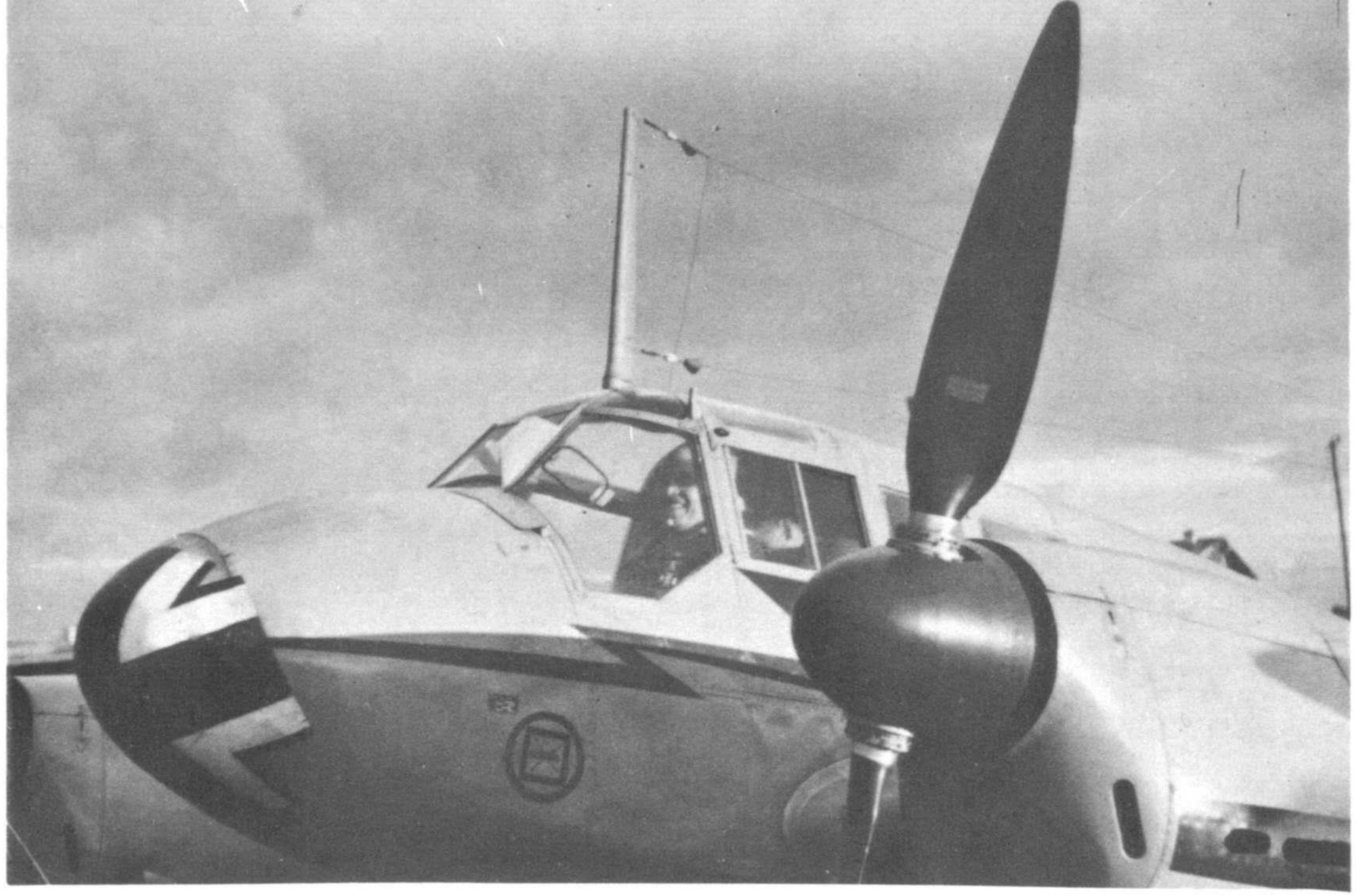


A **Ju(We) 34he** approaches the landing strip. This view shows the similarity in design and construction that the **Ju(We) 34** shared with its younger and more well-known 3-engined sister, the **Ju 52** transport.

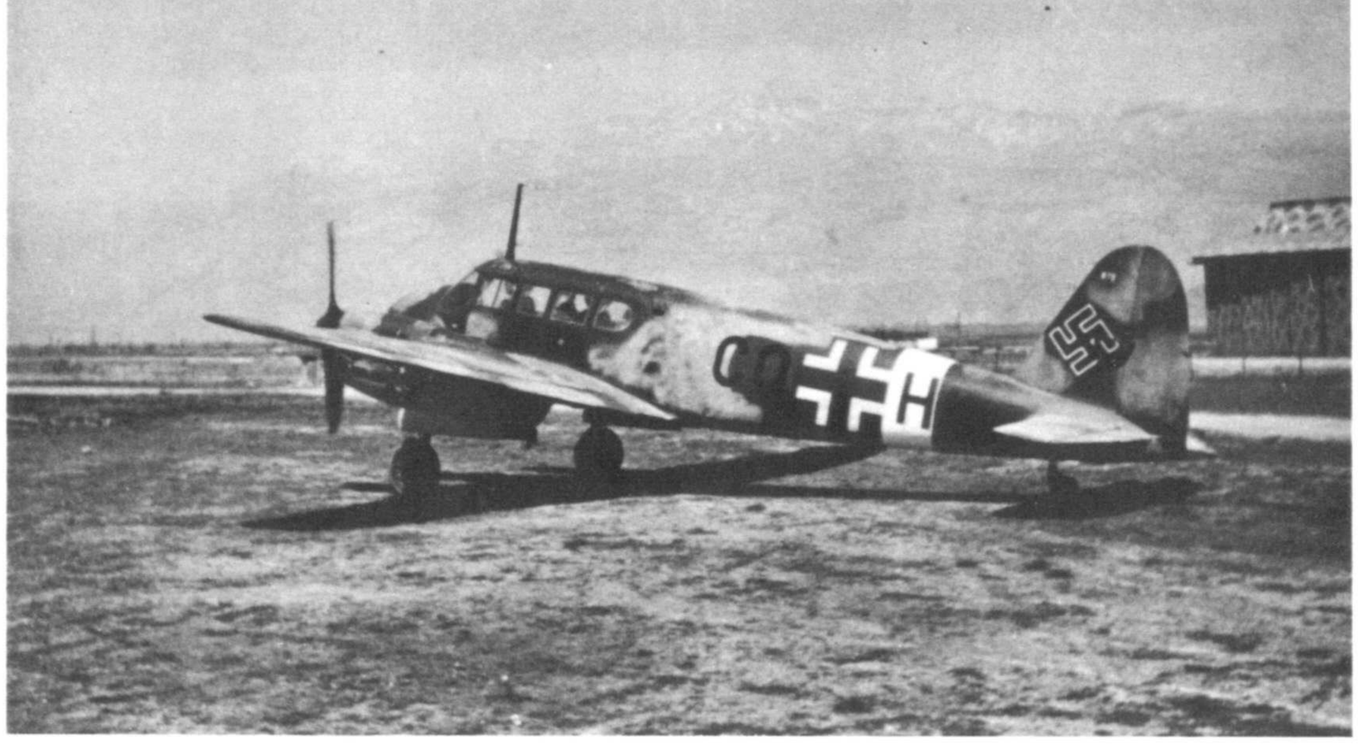


Junkers Ju 34

Here, under liberal camouflage netting, stands a group of **Junkers Ju(We) 34** instrument trainers bearing **Luftwaffe** markings of pre-WW II vintage. The **Ju(We) 34** was the predecessor to the **FW 58** in virtually all fields of training. This bird was so docile and reliable that she was used all the way through the Second World War.



Wehrmacht officers on the wing of a **Siebel Fh 104** twin-engined 5-place transport. This little **Siebel** gave the **Messerschmitt Bf 108** much competition as a personal transport and liaison aircraft.



(Above left) A nice view of the front quarter of an **Fh 104.** The unique national insignia on the nose of the airplane indicates that this is the personal transport of Field Marshal Kesselring, who is sitting in the pilot's seat.

This shot shows a **Siebel Fh 104** transport with a unique tropical camouflage scheme. The original colors were a splinter pattern of dark green and olive green, but a sand yellow paint has been sprayed at random over the upper surfaces in large splotches to allow the aircraft to blend in better with its desert surroundings. The large white fuselage band indicates that this aircraft is operational in the Mediterranean theater of operations.

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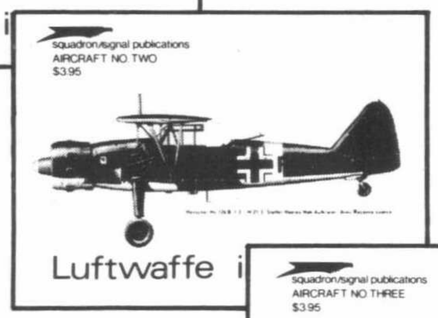

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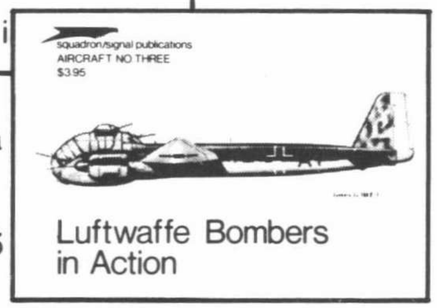

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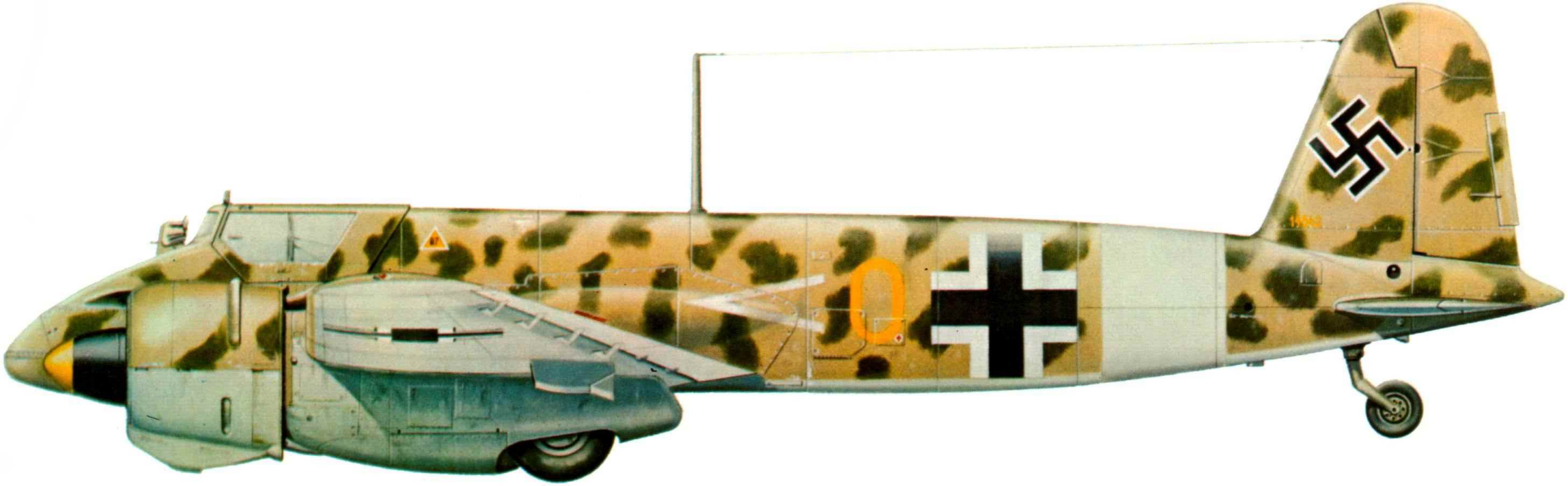
Messerschmitt Bf110D-3 of 9 Gruppe ZG 26



Henschel Hs129 B-2 of 8/Sch.G. 2 – 8. Staffel Schlachtgeschwader 2